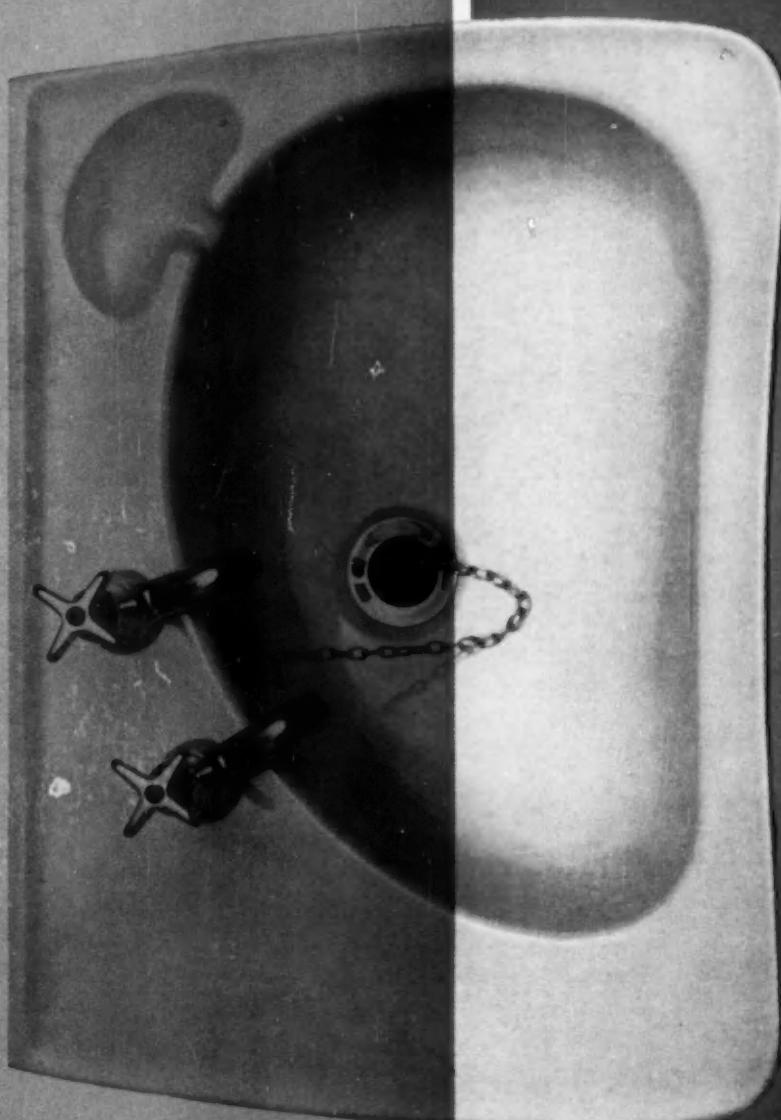
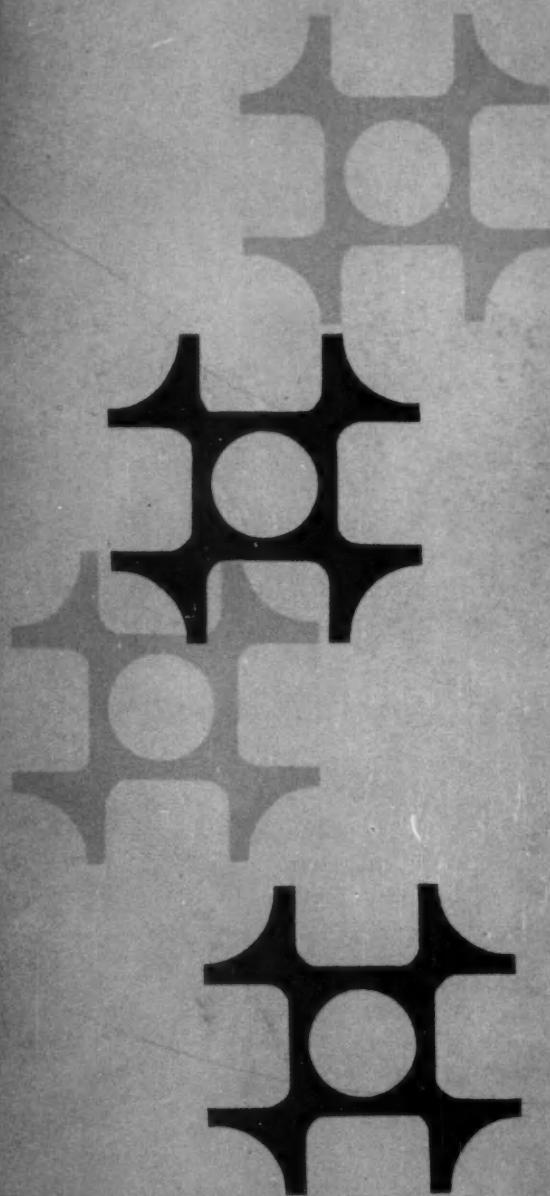


The Council of Industrial Design

August 1959 No 128 Price 3s

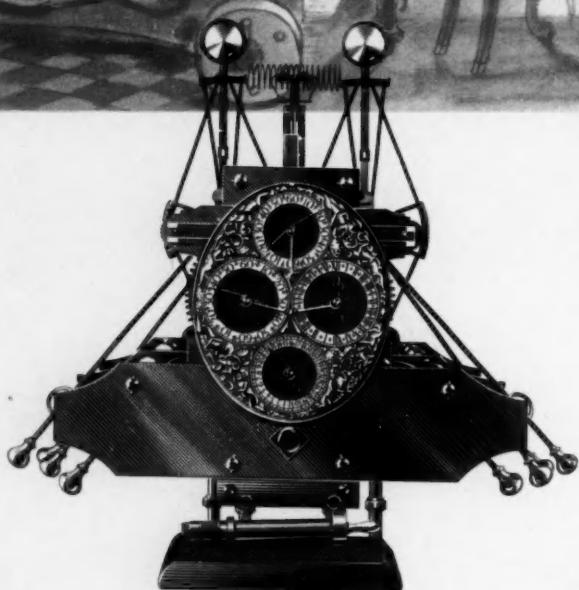
Design



PROFILE OF A CREATIVE MIND

Chronometer-Maker

John Harrison (1693-1776) was a self-educated carpenter who constructed the first timekeeper to perform accurately on board ship. This forerunner of the modern marine chronometer solved the age-old problem of finding longitude at sea.



In theory, it is possible to find longitude—a vital factor in plotting a ship's position—without a chronometer. In practice, however, an accurate timekeeper is a necessity. Until Harrison came upon the scene the difficulties inherent in such an instrument had been considered almost insurmountable. The varying motion of a ship, changes in temperature, and corrosion due to the elements had combined to defeat the best efforts of earlier inventors. Harrison, who had never served a day's apprenticeship to any clockmaker, was the first to appreciate the real problems involved, and to provide workable solutions to them. The five marine timekeepers which he designed and built are still working well—a fitting memorial to a man who saved countless ships and sailors from disaster.

In I.C.I., creative minds are constantly searching for new products and processes, and for improvements to existing ones.





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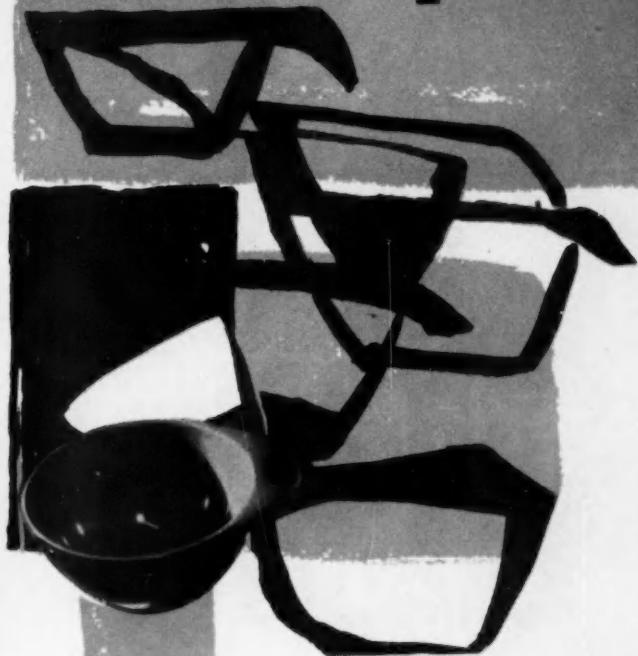
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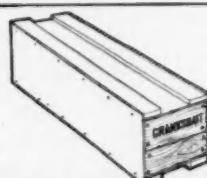
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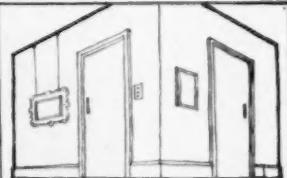
As well as being bent, blanked, and cut to almost any size, Bowater Board can be dressed up in all sorts of attractive colours and textures. For reasonably long runs, it can be given special hardening, softening, or other treatments to make it suitable for jobs like the ones shown here...



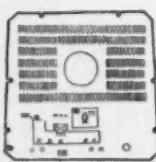
For British Railways carriage partitions, Bowater Board was specially treated for easier lamination of Melamine.



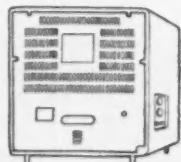
A specially softened board was produced for these crankshaft boxes, so that automatic nailing machines could be used.



By contrast, a specially stiffened Bowater Board was used for making these flush doors.



Another regular use—TV backs. Bowater Board is dark-stained so that overprinted circuit diagrams are clearly legible.



TV backs again: this time, Bowater Board was fine-meshed on the reverse side so it could take screening foil.



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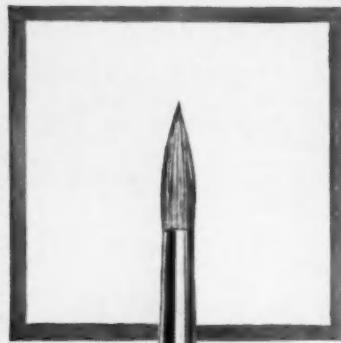
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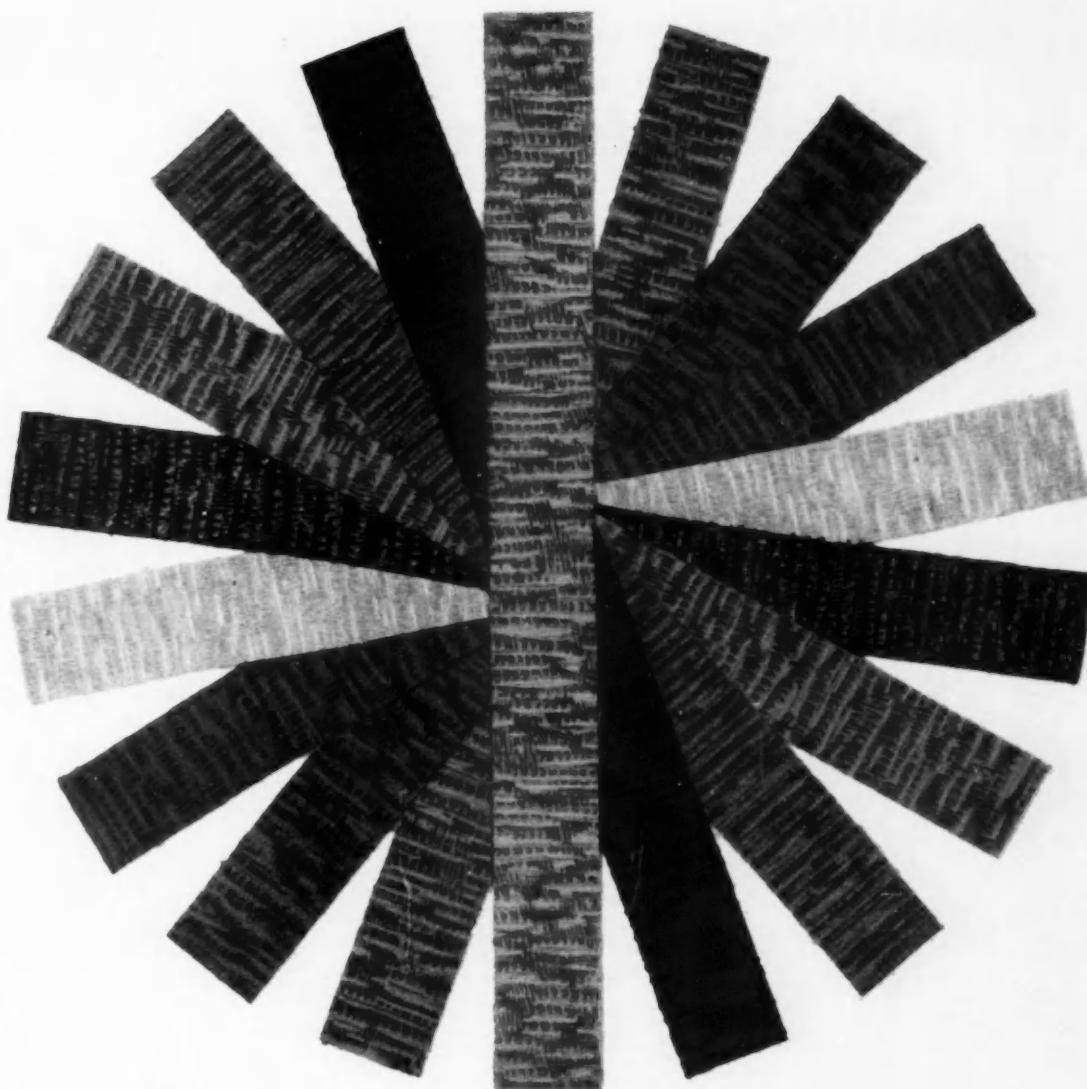
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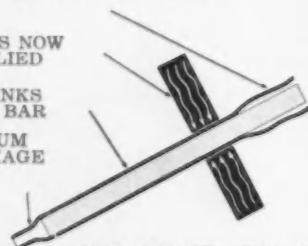
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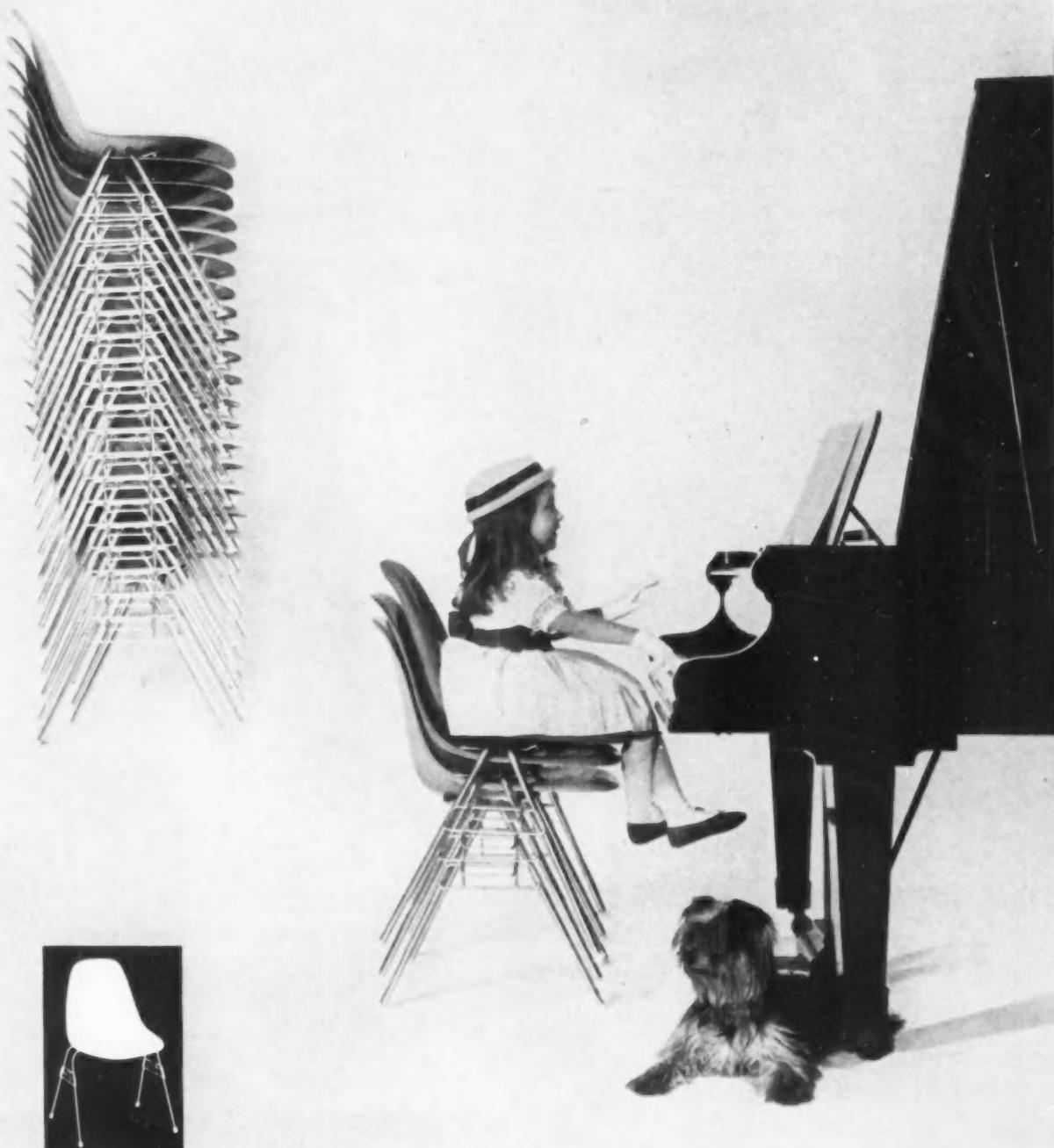
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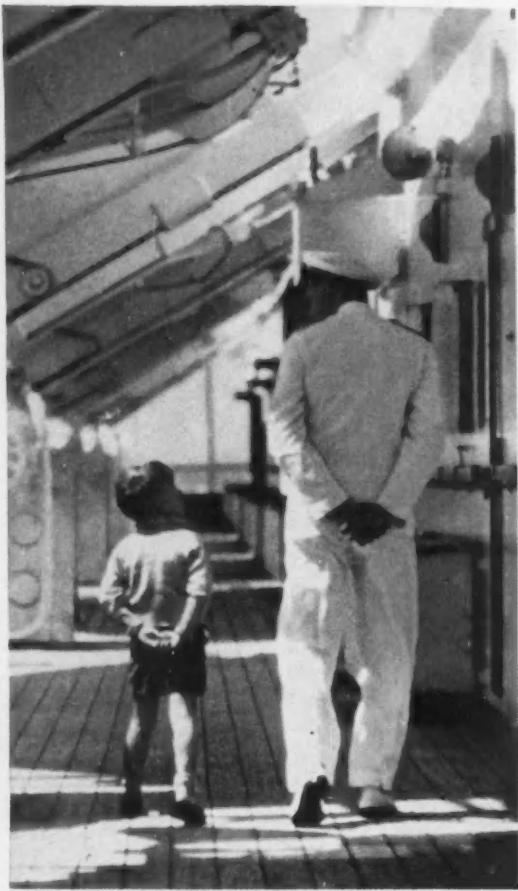


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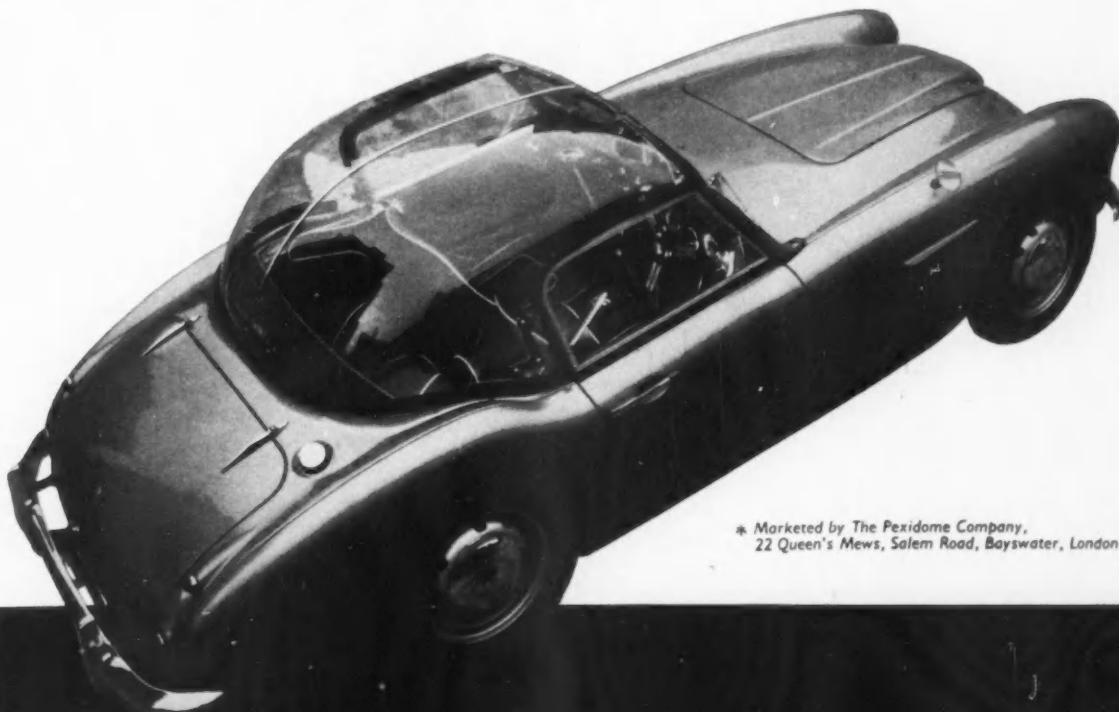
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'Spring Flowers', a poster designed for London Transport by John Farleigh. It is one of the series of full colour prints of famous London Transport posters, which includes the work of Edward Bawden, R.A., John Minton, E. McKnight Kauffer, and many others. The average size of the prints is 6" x 5". They can be obtained, price 1s. each (postage 3d.) from the Publicity Officer, London Transport, Griffith House, 280 Marylebone Rd., London, N.W.1.



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Number 128

August 1959

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The outer seven

It is now clear that Britain will not be associated with the European Common Market of the inner six for some considerable time. The consequent loss of opportunity which arises from our exclusion has already been discussed here, but the new proposal to re-group the seven outsiders* into a Little Free Trade Area has particularly strong implications as far as design is concerned.

The previous proposal for a full Free Trade Area would have created an overall market with very mixed design standards within which traditional design would appeal for some years; our more traditionally minded industries would therefore not have been immediately left out in the cold. This would be far less the case if the Little Free Trade Area became the free market in which Britain was operating in durable consumer goods. The lions included in this particular den are Sweden, Denmark, Norway and Switzerland, all of which have a widespread and progressive attitude to modern design. Moreover the Scandinavians have assiduously publicised their prowess in modern design and have co-operatively fostered the idea that it derives from their countries. The implication is that if you want good modern design you should think first of Scandinavia, and this has been repeatedly reinforced by the extensive promotion schemes for modern design which they have organised with European and American department stores.

This vigorous competition in an important range of goods should have a healthy effect on British manufacturers. Some would be able to meet the challenge with success but there are others who, in terms of design, would be virtually non-starters, and it is they who will have to consider most carefully what developments they would have to undertake in order to win their share in this smaller and generally more discriminating free trade area.

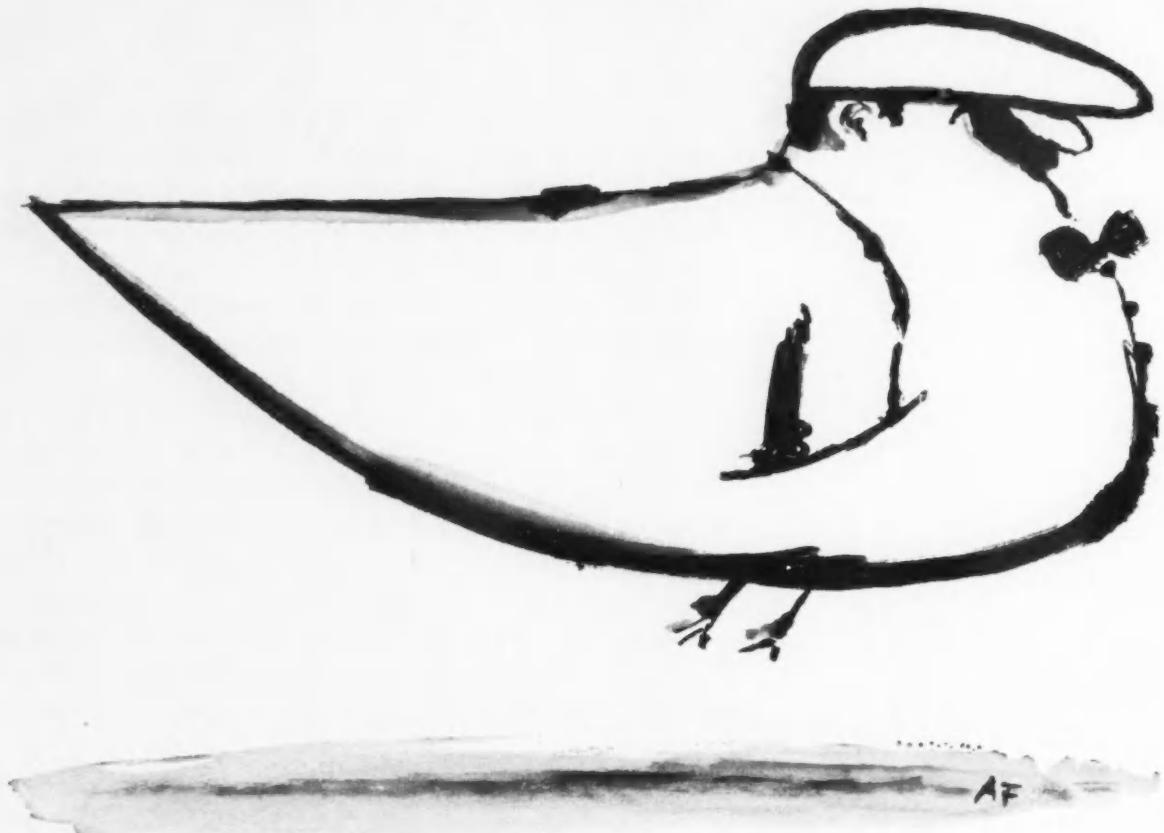
This more modest plan, which has arisen from the ashes of discussions with the Common Market countries, is a good second best which may well improve our position for negotiating with the six. It deserves support even from those firms who are most likely to feel the draught when the trade barriers begin to come down.

It would, however, be a grave mistake to imagine that inept copies of Scandinavian designs would provide a comfortable answer. Overseas buyers visiting The Design Centre repeatedly say they want modern goods, but they also want them to have a British character, which will be their strong selling point. There is no reason why they should not be both modern and British, if manufacturers will give young British designers their head; there are certainly increasing numbers on the Council's Record of Designers who can achieve this combination, but it takes time to integrate their talent with new firms. New design policies, like international trade discussions, are delicate plants which mature slowly; and the seeds should be planted in good time.

J.N.W.

*Sweden, Denmark, Norway, Switzerland, Austria, Portugal and the UK.

You chase space



AF

Time lost in youth, dreaming, dozing. Precious hours. Recapture must in stratosphere.
Shave London. Breakfast New York. Chase space.

Jettery, you board plane. Comfort. Calm. Barley sugar. Hostess mostest.
Five minutes . . . precious minutes. Breathe.

Wilmot Breeden where? Somewhere. Make seats? No. Make hostess? No, no.
Make glass of whisky? No. Well, where? What? Which? Tell.

Make inlet guide vanes! No? Fact? Yes, yes, hollow blades, super-duper-special process.
What do? Guide air. Where? Out of sight, out of mind. So!
Make anti-icing ducts, hydraulics . . . So! Fascinating.

Hostess! Soda-whisky. Wilmot Breeden make this, make that.
For jet-planes and. For automobiles and.
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New York. Time for breakfast . . .

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Education exhibited

The photographs on this page illustrate one of the most successful pieces of co-ordinated exhibition design that has been seen in one of London's great exhibition halls. Sponsored by the National Union of Teachers, the *Education and Careers Exhibition*, held recently at Olympia, demonstrated the value of concentrating on the basic essentials of display design to ensure a quickly understood message. Force of circumstances dictated the concept of simplicity, for the budget was extremely limited and in the end the finished display, covering 56,000 sq ft including circulation space, was produced for £48,000 which works out at the incredibly low

figure of about 17s per sq ft. The method used by the designers - architect Eric Lyons and industrial designer Hulme Chadwick - to achieve this economy, was a linking system of black painted builders' scaffolding supporting standard 8 ft x 4 ft display panels and canvas screening, surmounted by simple, unpainted wood facias. The result was colourful, unpretentious and full of interest - an exhibition brought very much to life by the crowds of school children watching and taking part. The contrast with the unrelated stands of private exhibitors on the first floor gallery emphasised the successful integration of the main display.



DANGER IN STYLING

A DESIGN INVESTIGATION

ROGER COLEMAN AND DENNIS YOUNG



Road accidents are a part of the pattern of our environment, particularly the urban environment. In industry, apart from educational propaganda, steps are taken to reduce the accidents by guarding machines and recently there are signs that manufacturers of machinery and equipment are becoming aware of the need to build-in certain safety factors at the drawing board stage.

As yet little work of either kind, except for interior padding and safety belts, has been done on road vehicles. This article outlines some characteristics of pedestrian/car accidents and suggests ways in which design and superficial styling of a car could be modified to reduce the severity of injuries to pedestrians. If front end styling can be lethal then its revaluation is overdue.

During the investigation various bodies were consulted for information or for opinions; these include: The Royal Society for the Prevention of Accidents, British Safety Council, Pedestrians' Association for Road Safety, Road Research Laboratory,

This photograph, staged and executed by Maurice Rickards, represents the casualties which occurred on a three-quarter-mile stretch of a London road in six months. The picture, without the superimposed car, first appeared in *Picture Post* for April 27 1957.

Ministry of Transport, Metropolitan Police, Dr R. I. Milne, Secretary of the Coroners' Society, and 114 coroners in England and Wales. DESIGN is also grateful for the help and interest of Sir Bentley Purchase, HM Coroner for County of London Northern District, and Dr Francis Camps, reader in Forensic Medicine, University of London.

Danger in styling

In Great Britain in 1958, 2,408 pedestrians were killed and 60,819 injured. Of these 26,561 were killed or injured in collision with private cars – the largest class of vehicle on the roads. Since the first pedestrian death in collision with a car in 1895, collisions between pedestrians and vehicles have become an integral part of the pattern of road use. This conclusion is unavoidable and any measures adopted to improve the situation must take it into account.

Most of the effort to reduce road accidents, particularly pedestrian/car collisions, has been in the form of exhortations to pedestrians and drivers by agencies such as RoSPA, the Pedestrians' Association and the British Safety Council, to "be a better driver", "look before you cross", and so on. However, there is a limit to the effectiveness of any propaganda and in these terms it tends to be constantly devalued by the 'it couldn't happen to me' attitude which seems to be a learned characteristic of practically all road-users' psychology. It is significant that the majority of owners see, or have been persuaded to see, their cars as more than utilities. They expect them to fulfil a variety of irrational, but nonetheless real requirements all of which tend to insulate drivers from the notion that their cars also can be lethal.

Removing errors

The alternative methods of reducing accidents would be to improve either the car or the road, or ideally, both. Road improvements, particularly in urban areas, carried out on sufficient a scale to be of any immediate value might be economically exhausting, and difficult practically. The most logical and profitable decision would appear to be to modify the design of the car to reduce both the chance of errors by taking into consideration the real, rather than imagined characteristics of human behaviour, and to remove the chance of serious injury should that error in fact occur. It must be borne in mind that the most rigorous programme of ergonomic design will not cut out accidents altogether.

One must accept the assumption, then, that accidents will be caused on the best regulated roads with the best regulated cars. Indeed the whole problem is worsened by the general failure to acknowledge that accidents are an integral to a road-using society.

The circumstances of any accident (a car/pedestrian collision in this context) are particular to that accident alone. Although it is possible to suggest broad patterns within a given group of accidents, the variables involved are numerous. For instance, there are the obvious facts like the speed of the car; the type of car; the condition of the road surface – wet or dry, well or

badly maintained; the age of the pedestrians involved. Other less obvious facts are the states of mind of the pedestrian and driver; the direction in which the pedestrian is walking in relation to the direction of the car; whether the pedestrian's weight is equally distributed on both feet or only on one foot; the type of shoes the pedestrian is wearing – high or low heeled, rubber or leather soled, studded; and many others. The effect of these variables makes it impossible to suggest a speed below which a pedestrian could expect to survive a collision with a car; pedestrian A could survive a collision with a car travelling 30 mph whereas pedestrian B would not survive with the same car travelling at 10 mph.

Common characteristics

On the other hand, in spite of these variables certain similarities exist between one pedestrian/car collision and the next. It has been pointed out by Dr Hjalmar Sjövall of the Institute of Forensic Medicine, Lund, Sweden, that pedestrian/car collisions happen at "the very last moment".¹ That is because both the driver and the pedestrian share a moment of realisation that they will collide and take whatever avoiding action the circumstances permit. In general, it seems that pedestrians tend to be struck by the corners or the outside edge of the front of the car rather than by the centre front. American evidence indicates that over 50 per cent of all collisions, whether vehicle/pedestrian or vehicle/vehicle, are glancing blows.² This was supported by James Tye, an administrative director of the British Safety Council, and the council's motoring expert. Therefore it is reasonable to infer that a modification to the frontal width and shaping of the car would result in less serious collisions.

However, before one can go into any more detail about the nature of the modifications necessary in the design of a car, particularly its front end and sides, it is necessary to examine the way in which the pedestrian is injured. In a study of 44 pedestrian deaths, Dr Sjövall showed that only three were actually run over by the vehicle. These three were small children, who, because of their size, were hit by the vehicle on or above their centres of gravity and were thus knocked forward and passed over by the car. Of the remaining 41, six, to all appearances, were killed on secondary impact with the ground or some object other than the car after being hit, and the rest, 79 per cent in fact, were fatally injured by falling against the car itself. (Adults,



Sam Lambert

Sir Bentley Purchase, HM Coroner for County of London Northern District, with Dennis Young behind, shows a dangerous, ornated headlamp hood.

¹ Preventing Traffic Accidents by Altered Design of Cars, paper delivered to the International Meeting of Forensic Pathology, Brussels, 1957.

² From a survey of 10,000 motor accidents conducted by the Association of Casualty and Surety Companies, U.S.A.

unlike children, tend to be struck on or below their centre of gravity, knocking them back over the vehicles, but this will be conditional on individual circumstances, for instance whether the victim was hit from the rear, or at the side, etc, 1, 2 and 3). However, the dominating fact remains that the largest group was fatally injured by falling *against* the car itself. (This view is supported by the evidence supplied to DESIGN by 114 coroners.)

The pedestrian, then, is in a double-danger when involved in collisions with a car; ie, he may sustain injuries from primary impact with some part of the car (often the bumper resulting in tibia/fibula fractures), and injuries from secondary impact on the car or the ground or some other object (skull fractures and thoracic injuries).

Information before exhortation

The main problem the investigators faced in preparing this article was the scarcity of relevant information. Police accident reports do not deal sufficiently with the cause rather than the effect of the accident. Such organisations as RoSPA, the Pedestrians' Association and the British Safety Council were unable to provide evidence of any thorough research into the causes of motor accidents, although the investigators are indebted to Mr Tye and Leonard D. Hodge of the British Safety Council for their help and interest.

A car (or any vehicle) involved in a collision with a pedestrian can cause injuries in two ways; on primary impact with the pedestrian, usually against the front, but also against the sides of the car; and secondary impact against the front, the bonnet, the windscreen, the door pillars, projections such as mirrors, mascots³, indicators, door handles, etc. To reduce the severity of secondary impact injuries against certain of the second

³ The danger of using mascots on cars was discussed in DESIGN for July pages 65 and 67.

set of features should not be difficult as they are essentially minor attachments that could be dispensed with (mascots) or placed at the rear (aerials), or redesigned (mirrors and handles and headlamp hoods⁴).

The French Government recently issued new regulations concerning the bodywork of cars made or sold in France, which lay down that the body of a car in front of the windscreen must not carry any sharp projections pointing forward that are not essential technically and that might increase the risk of bodily injury to other road users, particularly in the event of a collision. For instance, indicators and devices to deflect insects or snow must be lightly made and be either elastic in construction or flexibly mounted on springs. External mirrors and their mountings must not have any point or sharp edge in a forward direction. The severity of secondary impact injuries against the structural parts of the car cannot easily be reduced without a radical redesign, which may not be feasible from either the technical, economic or social points of view. Possibilities are the use of materials other than steel, eg glass fibre, or some form of padding over the steel, eg foam plastics, cork or rubber.

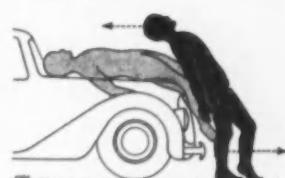
⁴ The Road Research Laboratory reports that: "external headlamp hoods are often fitted to modern British cars to intercept upward stray light, which becomes troublesome in mist or fog and in heavy rain. Photometric measurements and observations in artificial fog showed that some benefit was derived by their use on headlamps with unscreened filaments. However, the risk of increasing the severity of injury to other road users, particularly pedestrians, in the event of an accident, appears to be so great that some other means of reducing stray light is desirable."

"An internal bulb shield has been designed which can be easily fitted to the standard British block-lens headlamp by removing the bulb, slipping the shield into the unit and replacing the bulb. This shield causes a reduction in the maximum intensity of the forward beam of less than 15 per cent (partly due to slight defocusing of the beam, and partly to the shadowing of the reflector by the two side supports to the shield) but there is a considerable reduction in the stray upward light which is so troublesome in mist or fog."

"Upward stray light can also be reduced by incorporating the screen in the bulb itself. Examples of new bulbs of this type with screened dip filaments were found to be less effective in blocking upward light than the internal bulb shield, although they did not appreciably reduce the intensity of the driving beam. Either of these methods is to be preferred to external hoods." *Road Research 1957. HMSO 1958.*



1 Impact from the side. The weight bearing left leg will fracture and the body will be thrown in front of the car to be run over.



2 Impact from behind. The shoes are studded and will slide forward throwing the body on to the bonnet and windscreen to cause secondary impact.



3 Impact from behind. The shoes are rubber-soled causing the body to fall forward in front of the car.

The drawings are reproduced from *Practical Forensic Medicine* by Dr Francis E. Camps and Sir Bentley Purchase, by kind permission of Hutchinson's Medical Publications Ltd. Dr Camps has told DESIGN that in his experience most pedestrian/car deaths are due to secondary impact, e.g. against the ground after the pedestrian has been struck by the car.

Three cars analysed

Primary impact injuries are almost always caused by the front end of the vehicle, so the problem in this respect is more direct. With this in mind three cars, one British - the 1958 Hillman Minx Convertible, one American - the 1958 Oldsmobile Super 88, and one French - the 1958 Panhard 216, have been selected for modifications, not because they are better or worse than any others, but because they represent the styling of the countries that produced them. The purpose of the modifications is to reduce the severity of primary impact injuries resulting from collisions between pedestrians and cars to the order of fatal to serious, serious to slight, and slight to minimum injury.

It should be emphasised that this is only one aspect of a complex problem (see *Ergonomics Versus Styling in Cars*, DESIGN July 1958), and alone it will not provide the optimum solution. It was thought important that whatever modifications were made, they were done within the character of the car's original styling, as the glamour quality that cars possess is directly related to their overall function. The modifications represented

on the following pages do not preclude the development of a more integrated design based on *all* the information that is available to designers. Such an integrated design is outside the scope of this investigation. There is no reason why a car designer could not make use of available accident prevention data and still retain the image that car owners expect, although he would be better advised to consult an ergonomist and conduct experiments.

The proposals on the following pages are in fact only proposals; they are in no way intended as final answers to a pressing problem. Their function is to act as a pointer to further investigations, particularly in the collecting of relevant information by safety organisations as well as in official circles.

This investigation recommends that a committee be set up representing such bodies as the Ministry of Transport, the safety organisations, the Society of Motor Manufacturers and Traders, the Road Research Laboratory, the Coroners' Society, and the British Standards Institution, to study this particular question of front end styling and safety.

continued ▶



For each car there are two sets of drawings - the original design and the modified version. In the captions to the original design the potential injury-causing features are listed, and in the captions to the modified version the revisions and their effects are listed. No aesthetic criticism is being offered of the three cars; the modifications have attempted to remain in step with the original styling.

1958 Oldsmobile 'Super 88'

The Oldsmobile *Super* represents an advanced stage of post-war American automobile styling.

original design

Wide, deep front giving an advancing area of approximately 19 sq ft. Concentrations of heavy features, such as headlights, towards the corners of the front. Heavy projecting bumper bar running whole length of front with a convoluted section. Sharp mascot in centre bonnet. Projecting aerial mounting in front of windscreens.

modified version

Wide front accepted, but vertical and horizontal sections softened into curves. Sharp features removed from around headlight mountings to give a curved corner (concerning cars in general, the majority of collisions with pedestrians involved the corners). Flat, wide bumper bar without projections in sympathy with the rest of the front. Removal of mascot and aerial mounting (the latter not shown on drawing).



1958 Panhard 216

As far as design for pedestrian safety is concerned the Panhard comes nearest of the three cars to meeting the general requirements. It avoids the flat front and therefore a large advancing area.

original design

Sharp projecting features over headlights. Complicated broken sections at centre of bumper bar.

modified version

Peaks over headlights removed and lights taken within curve of the body. Simplification of centre bumper, and provision of a small metal grille. On plan the curve of front has been increased to reduce the effect of an advancing wall.



Photographs by Sam Lambert
Drawings by Dennis Young

1958 Hillman Minx Convertible

The styling of the *Minx* represents a general trend for post-war British cars in the medium price range. This trend is derived largely from American example and adjusted to the smaller British car; as such, the criticisms are similar to the Oldsmobile's.

original design

The flat front taking up virtually the overall width of the vehicle. Concentration of features at corners, eg projecting headlamp hoods. Narrow bumper bar with pronounced leading edge and heavy overriders.

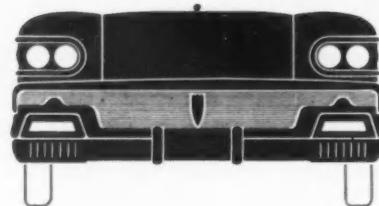
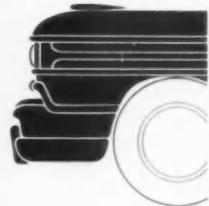
modified version

In general as Oldsmobile.
Simplification of whole front end.
Headlights incorporated into corner curve.
Wide, flat bumper with no overriders.

original design



modified version



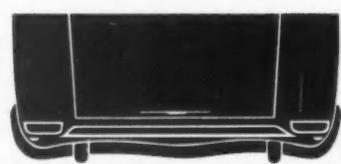
original design



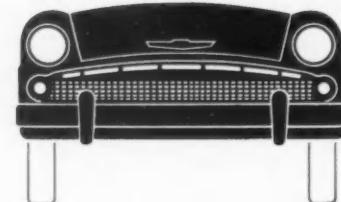
modified version



original design



modified version



INTERIOR DESIGN

an enquiry into current training, prospects and practices

STEPHEN GARRETT

In preparing this article the author sent a circular to all art schools in Britain to check information on interior design courses, numbers of students and prospects for them. He visited five of the leading schools and met a number of important designers. He discussed the professional status and opportunities for interior designers with various societies. Contact was made with other countries and information collected on the work done by interior designers abroad. The author, an architect in private practice, teaches part-time in the interior design department at the LCC Central School of Arts and Crafts.

The purpose of this enquiry is to try to establish if there is a need for interior designers today, and if so whether the training that is being provided is adequate for the tasks that the interior designer might be expected to accomplish. But first it is necessary to decide what we mean when we talk about interior design. Broadly it may be defined as that part of the designer's activity which directly affects the occupants or users of a building, a ship, a showroom, a house and so on. Thus it would include all those items with which people come into contact in such an environment, including the planning of space, the treatment of surfaces, the planning of lighting, as well as the design or selection of all types of interior furnishing and equipment.

The broadness of this activity may be regarded as the main feature which distinguishes the interior designer from the decorator. Interior designers are often popularly associated with dream-like upper class living, and this misconception is reinforced by publicity which attaches to the boutiques of the fashionable decorators who are more often than not concerned with the superficial application of styles, rather than the solution of fundamental interior problems. While there may well be a need for the specialist in period styles, we are concerned here only with the type of designer whose approach can be compared with that of the experienced modern architect or industrial designer. In other words he will be concerned in the design of the *complete* interior, including functional as well as aesthetic problems.

He may be called on to design the structure of a false ceiling or a partition, and since, in common with current architectural thought, the structure may be revealed as part of the finished scheme, it is important that the appearance of the structure should be controlled by the same aesthetic discrimination which will be exercised throughout the interior - a factor which may well not be taken into account by the decorator who in many cases will leave structural problems to the contractor. The interior designer may also be called on to design or commission special furniture, special lighting fittings, special carpets and curtains, etc. Some of these requirements will overlap with those of the architect or with various specialist designers. Yet it is the particular combination of skills which is present in few designers or architects which suggests that interior design should exist as a separate profession.

If, however, we look at a representational cross-section of recent interiors of a high standard we shall





Sam Lambert

The council chamber of the Trades Union Congress memorial building, BELOW, is an excellent example of interior design that reaches the highest standard. Like the other four examples on the following page it was designed by an architect - in this case David du R. Aberdeen, LEFT, who was responsible for the design of the complete building. In company with the other architects whose work is illustrated in this article, Mr Aberdeen considers that architects should be able to handle all interior problems: "The best scope for the so-called interior designer", he says, "is in the decorators' field in situations requiring a 'here today and gone tomorrow' attitude." This is characteristic of the architect's approach and illustrates one of the chief stumbling blocks to the attainment of a higher status for the interior design profession.





Who designs the best interiors?
Architects believe they do
themselves, which is a measure
of their respect for the interior
design profession.

ABOVE F. R. S. Yorke, of architects Yorke, Rosenberg & Mardall, discussed interior design in the light of the experience of his firm in designing a wide range of buildings including Gatwick Airport, TOP. "I see no need for interior design as a separate profession", he said. "The interior of Gatwick is exactly what you would expect to find from looking at the exterior... if a person is going to learn all that is necessary to become an architect, he should be capable of designing an interior."



ABOVE Architects Norman Whicheloe, left, and Stephen Macfarlane are shown here with the Bristol showroom they designed for Ogdens Typewriters Ltd. They believe it is dangerous to have a separate interior design profession since the designer would have to know how to handle space as well as understand materials and colour. But if a person wants to specialise "... three years general training in architecture could safely be followed by a specialised course in interior design."



BELOW Paul Hamilton, senior assistant architect in the chief civil engineer's department, British Railways Eastern Region, designed the interior conversion of this ladies' lavatory at Liverpool Street Station. Although this would seem to be a simple problem for an interior designer, Mr Hamilton said: "This interior posed structural difficulties as soon as work started. Whatever one does in the way of interior design, one cannot begin until all the functional problems have been solved.... If an architect is not capable of doing interiors he should give up. I would abolish all courses in interior design."



Portrait photographs by Sam Lambert

BELOW Geoffrey Powell, left, Peter Chamberlin, centre, and Christof Bon (architects Chamberlin, Powell and Bon), designed this showroom for Clutson & Kemp Ltd. They were critical of the training available for interior designers: "Interior designers seem to be only trained in decoration and do not understand the values of space, form and structure. There are at present far too many architects and we do not see any reason why some cannot specialise as interior designers instead of spending their lives as architectural assistants.... An interior designer is an architect who has limited himself to one facet of architecture."



find that only a few have been carried out by professional interior designers, and of these, hardly any will have attended one of the existing interior design training courses. The five interiors shown opposite and on the previous page illustrate the point, for they are all by qualified architects. A further example is discussed in the article on pages 36 and 37, though in that case it was carried out by an industrial designer known for work in varied fields who had a scientific training.

Two questions will follow as a result of these facts. Firstly, why, if this situation is correct, should not all interiors be handled by architects or industrial designers? The answer has already been partly given. The architect's training does not automatically equip him to tackle interior design problems competently, and many architects reveal a lack of sympathy and understanding when they get down to details of an interior. This is due, in part, to the complexity of the architect's training which includes such subjects as structural mechanics, drainage, bye-laws, etc, leaving little time for interior problems. The whole approach of an architect is towards appreciation of volumes through which one passes, the changing relationship of one building to another. The interior designer on the other hand is concerned mainly with intimate areas, usually to be seen from a position of rest. This demands that the interior designer sees his problem in more personal terms. Why so many architects fail as interior designers is that their approach is toward the building as a whole whereas the interior designer, though he must relate his interior to the building, has a far more personal relationship with the people who will use it.

What training is available?

The second question is more important. If, in spite of the omissions in the architect's training, the best interiors are nevertheless designed by architects, what work is being done by all those who are trained specifically as interior designers? Further questions must inevitably follow. Do these interior designers have any professional status? What qualifications do they have? Is their training of the right kind?

Strangely enough there are over 100 art schools in Great Britain holding courses in interior design though the vast majority of these consist of part-time, usually evening, classes where students attend out of general interest without any professional ambitions.

Out of the 100 schools, 21 run full-time vocational courses of which the Ministry of Education approves 15, and these are recognised as leading to the National Diploma in Design (special level)*. In addition, the two Polytechnics in London, the schools of art in Glasgow, Croydon and Portsmouth award their own diplomas, and the Royal College of Art holds its own post-graduate course leading to the college's diploma DES RCA.

The structure of these courses, as well as the age and qualifications at entry, vary a good deal. In the case of the NDD courses there are about 220 full-time students of which just over half are men, starting their training usually at the age of 18. The NDD courses will normally

last three years and will have been preceded in most cases by the completion of a one- or two-year general art course (possibly up to NDD intermediate level).

Qualification not respected

Of the 220 students an average of 18 a year gain their diploma. Last year, for example, 27 students were entered, and 15 passed. The 220 students are of course spread over the three years - but even allowing for a high rate of wastage it may be assumed that at least 50 students continue into their third year. Why then is there such a low number sitting for the diploma - and even then only a 55 per cent pass?

There are a number of reasons. Firstly, the NDD qualification is not considered to be of much value by most students. They know that a prospective employer will judge them on the work in their portfolio rather than any other qualification. Some students may decide late to switch from interior design to furniture design or other subjects. It is a melancholy fact that many students will persist to get a NDD only because they feel it will be essential should they decide to teach.

The largest interior design department in the country is at the LCC Central School of Arts and Crafts. A student is accepted after he has shown proficiency at another art school where he may have taken a general art course. Students for both furniture design and interior design are accepted for the three-year course and will follow a joint curriculum for the first year, in which they will be given preliminary training in design fundamentals and technology. This aims to develop a creative way of thinking and encourage a fresh and scientific approach to design problems. For those who, after the preliminary year, decide to proceed with interior design, the following two years will include further lectures on the history of architecture and design, closely allied with the execution of design projects through all stages, and frequent periods in the wood and metal workshops. On completion of the course the student may gain the school diploma in addition to the NDD.

Link with architects' training

The Royal College of Art has a school of interior design, started in 1951, where students are trained for periods of from two to three years. These students will have either already completed an interior design course at another art school or be architectural students who wish to specialise (though in fact there are few such students at present). About six students complete the course each year.

In addition there is The Division of Decoration, an offshoot of the Bartlett School of Architecture. This course, which is recognised for NDD, does not aim to train interior designers, in the full sense of the term, but is concerned only with the comparatively superficial problems of applied decoration.

To sum up, there are about 40 newly trained interior designers looking for employment each year. They will have different qualifications and probably very different ideas about what work they will undertake. (This figure

*Art schools holding interior design courses approved by the Ministry of Education for NDD:

High Wycombe College of Further Education
Bristol West of England College of Art
Sunderland College of Art
Liverpool College of Art
Manchester Regional College of Art
Leicester College of Art
Hammersmith College of Art and Building
LCC Central School of Arts and Crafts
Bartlett School of Architecture (London)
Nottingham College of Art and Crafts
Stoke-on-Trent College of Art
Kingston School of Art
Birmingham College of Arts and Crafts
Middlesbrough College of Art
Leeds College of Art

should be compared with the 850 architectural students who qualify each year.)

In the end, whatever the merits of the school syllabus, the quality of the training will depend on the staff. This is true of any training but it applies particularly to interior design because of the diverse nature of the work. Most schools retain some full-time and some part-time staff, which is undoubtedly a sound arrangement, for it enables a continuity to be achieved while the part-time staff can bring to the students the discipline of live commissions. Also the need for some instruction in architectural problems is an essential requirement, yet by no means all schools include an architect on their staff. In the smaller interior design departments the lack of competition between the students themselves and the limited staff (possibly one full-time and two part-time teachers) make it extremely difficult to achieve a high standard.

Jobs for ex-students

What happens to these students once they leave art school and look for employment? The answer is disturbing to anyone who regards interior design as a serious profession. Students drift into all types of employment, only a few obtaining the work for which they had been specifically trained. Many obtain jobs in the studios of the big furnishing contractors or of the wallpaper and paint manufacturers. Here they become not

so much designers as renderers concerned with the preparation of perspective drawings whose purpose is to win contracts for their employers. Heals, Maples, Peter Jones, John Lines and Sandersons are examples of these firms which prepare schemes for submission with tenders.

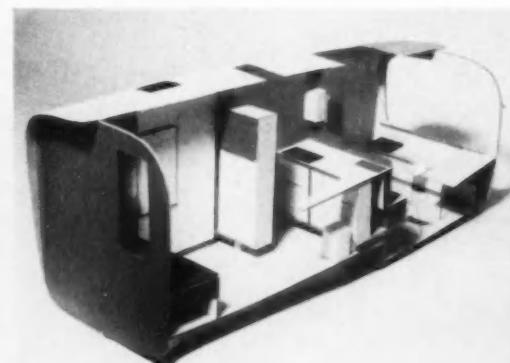
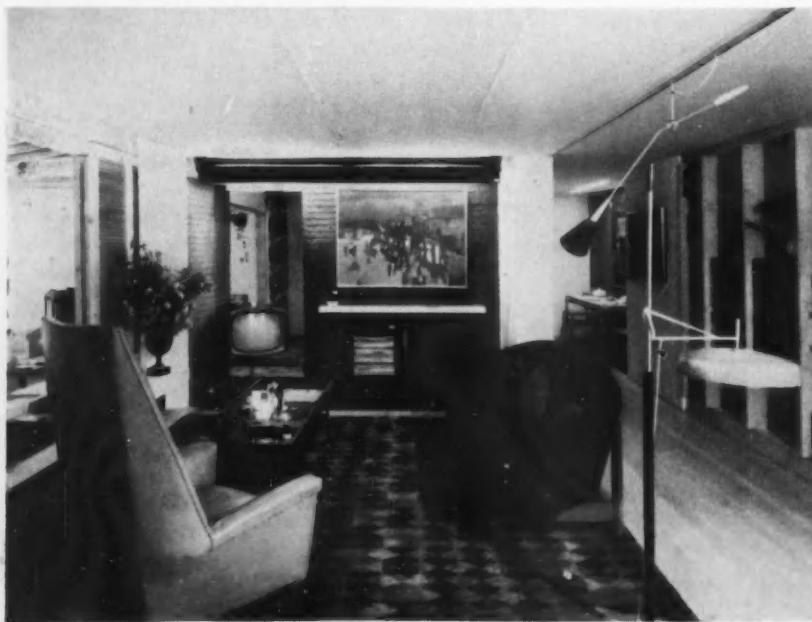
The value of this type of job to the designer depends on the individual firm (a few maintain a consistently high standard; others do not) – but in any case such work is prone to severe limitations. For the studio is often seen as a necessary but tiresome adjunct to the real business of winning contracts. The designer has no genuine relationship with the client – in fact in most cases will never meet him – the instructions usually being brought back by a salesman or director, who will hardly dare to quibble with the client's views on what should be done for fear of losing the contract.

The studio of one large furnishing contractor may be taken as a typical example of current practice. This studio employs six senior designers and six intermediate designers and three or four trainees, all under the direction of the studio head. Some of the staff are school trained and some are attending evening classes. The work being undertaken is about 70 per cent contract (ie, for public companies), the remainder being for private clients. Whereas in the past three quarters of the work was for traditional styles, the balance is now about even with what is generally called 'contemporary'.

Royal College of Art

The Royal College of Art holds the only post-graduate course in interior design in Great Britain and has about six students in each of its three years. The illustration BELOW RIGHT shows an example from a recent exercise in which students were required to design residential caravans. The students started by preparing a report in which they re-examined the basic requirements of a caravan (eg "What water storage is required for a 4-person caravan; what volume and what does it weigh?") With this basic research accomplished, drawings and

three-dimensional models were prepared. The emphasis here was on attacking the problem from the roots. The interior designer of the future, if he is to make any real contribution, must start by first assessing the essentials. BELOW LEFT *A Room of Our Own*, an actual interior project carried out last year. Interior design students prepared exhibition room settings for designs carried out by students from other schools in the college – a rare opportunity for working to a full scale (see DESIGN December 1958 pages 40–2).

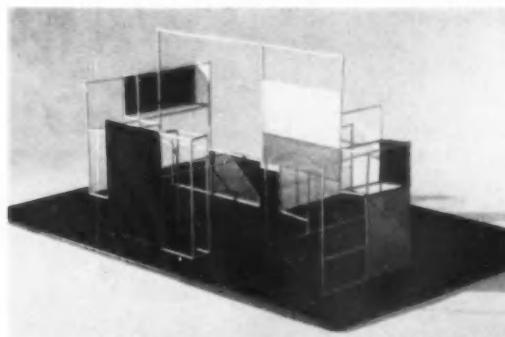




Hammersmith College of Art and Building

This is one of the more advanced of the 15 art school interior design courses leading to N.D.D. Full- and part-time courses are held. There are about five students in each year of the four-year course. In addition to tackling actual problems in interior design the course includes the study of furniture, furnishing, lighting and the history of architecture and design. Skilful atmospheric perspective drawings suggest an orientation towards trade requirements.

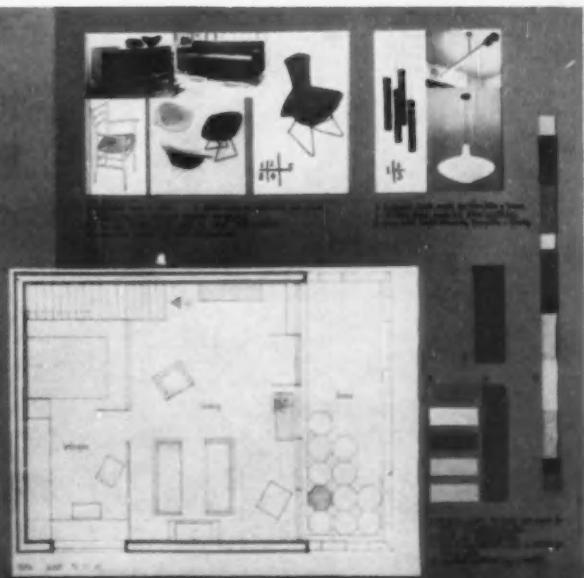
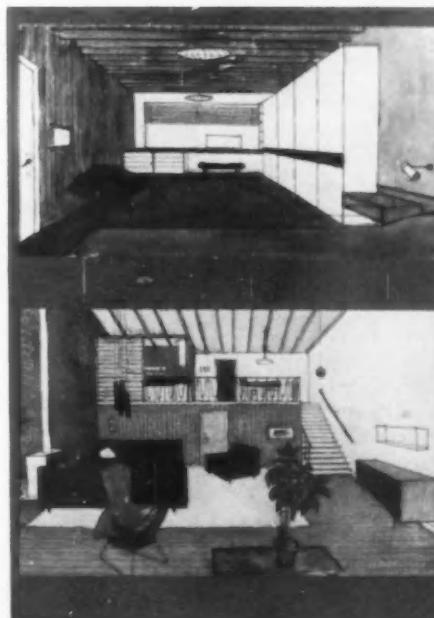
LEFT A sketch design for a domestic kitchen and dining room using all-electric equipment. BELOW An historical museum study by a fourth year student.



LCC Central School of Arts and Crafts

This is the largest art school interior design department (35 students) with a course leading to N.D.D and the school's own diploma.

Throughout the three-year, full-time course students attend sessions in basic design. These aim to break down the reserves and previous conceptions of students, stir them into fresh thinking and gain experience in a wide variety of techniques. Basic design classes, which are included in interior design courses at most schools, are considered an essential part of a designer's all round development. The illustration, LEFT, shows a recent example of a basic design study: Shown BELOW are designs by a second year student for an interior design problem where good planning, accurate selection of materials, and informative (rather than atmospheric), presentation are required.



The staff has been selected to cope with the variety of styles of work that comes in, and it is decided at the outset of a job whether to allocate it to a traditional or a 'contemporary' man. However, it is generally believed that a designer *should* be able to turn his hand to any style; that there could be any loss of integrity on the part of the designer in falling in with this attitude has apparently never been seriously considered. Such an attitude cannot help being extremely demoralising for a designer and if he does not move from his environment he will quickly lose any respect for the integrity of his profession that his school may have given him.

A few students get employment in architects' offices, but often only as poorly paid assistants rather than as interior designers. This is extremely unfortunate as, without question, it is in such offices where the fullest experience could be gained, and ultimately where the experienced interior designer could be of most benefit.

Professional status lacking

Possibly the greatest hurdle retarding the acceptance of the interior designer as a specialist is his lack of professional status.

The NDD means little to prospective employers who base their opinions on the quality of work submitted. Other diplomas offered by individual schools are hardly likely to be much more convincing of the designer's abilities, though the diploma of the Royal College of Art, DESRCA, naturally carries more weight owing to the comparatively advanced nature of the course and the restricted output of trained designers.

In searching for some more positive indication of professional status one looks to the appropriate institute or professional body. Two such bodies are open to the interior designer. The first and by far the most active and progressive is the Society of Industrial Artists, which has 100 members registered as interior designers, of which 43 are architects. But the body which, on the face of it, should be the obvious organisation to represent the interior designer is the Incorporated Institute of British Decorators and Interior Designers. This institute, founded over 60 years ago, has over 800 members (of which only four are architects). Unfortunately the IIBDID has done little to promote the idea of interior design as a serious expression of current needs in our living and working environment, largely because it continues to see the subject as a matter of applied styles.

Yet the attitude of the institute has changed in recent years. Perhaps because of the increasing seniority of its membership and because of the growing acceptance of modern design by the general public, it has re-arranged the qualifications for membership. The examinations are in fact exhaustive. But while the syllabus appears excellent on the more traditional craft subjects, it still seems curiously unreal when dealing with practical problems of design today. How, for example, is a student to cope with the following instructions from a recent examination, in which an imaginary client's vague brief is quoted?

"The scheme must be colourful yet restrained in

treatment. The floor is to be close carpeted, and the furniture to be 'of the Regency style if we cannot get what we want from the best of the present-day furniture manufacturers - but we will not have any of the advertised brands'."

Planning for higher standards

What can be done to raise the status of the profession in this country? It is certainly not enough for the interior designer to complain that he is ignored by the architect or by other people who are in a position to employ him. He must first persuade the architect that he can provide a service which is worth buying. We have seen that an analysis of the problems involved suggests that the specialist interior designer has a very definite place to fill. He is needed to complete the architects' team, and should preferably work within the architects' office where he can provide the specialised attention to the details of an interior which are often overlooked. He is also needed to provide a similar service, as an independent professional man, direct to a client, in cases where purely interior problems are involved. Yet with a few exceptions the courses available, and the qualifications offered by the schools, do not induce the confidence in the interior designer's abilities which the architect and client can be expected to demand. The interior designer must be able to talk the architect's language and amplify in detail what he has designed in principle. The training available for interior designers goes only a little way towards this and too many students qualify but still have only a rudimentary understanding of the problems involved.

The emphasis in many of the interior design courses is too much on an ability to produce pleasant looking perspectives and not enough on the cultivation of a sound basis for design and on the preparation of working drawings and details which allow work to be carried out accurately. It seems essential therefore that interior design training should be organised jointly with architectural courses for at least part of their time. This is such a fundamental requirement that it is strange that at the Bartlett School of Architecture - one of the few architectural schools where interiors are considered at all - the course should be devoted to decoration. It is impossible not to feel that this is a wasted opportunity, for this type of arrangement - an interior design school run in close conjunction with an architectural school - should be considered as the ultimate aim in interior design education.

In the meantime the art schools should seriously reconsider their objectives. If they are planning to produce the type of designer who will want to do more than make pleasant looking perspective drawings in a furnishing contractor's studio, the courses must be broadened in scope with higher standards necessary for qualification. This may mean some concentration of courses in fewer centres and an energetic attempt to obtain the co-operation of architectural schools. Only when these higher standards are achieved will the profession be recognised - the status of the profession will then take care of itself.



Work by contract furnishers

More students go into the studios of contract furnishers than into any other form of interior design employment. This can give experience in some of the best, and some of the worst, interior design work being done today. The right choice is vital to the student as it will colour his whole attitude to design in the future.

ABOVE Perspective drawing of managing director's office for Siemens

Edison Swan Ltd, London, designed by Charles F. Gage of Heal's Contracts Ltd, an example of the high standard maintained by this firm. BELOW Perspective drawing of executive's office in London prepared by White Allom Ltd. While the quality of design is questionable the technical skill in presentation is obvious and is considered a first requirement in most furnishing contractors' studios.



Partitioning system

integrates screening, services and furniture
in new wallpaper showrooms and offices

GEOFFREY SALMON

In our crowded cities, office floor space is an expensive commodity. The problem of dividing that space economically and simply into smaller units is now very often solved by one of the 45-odd manufacturers of prefabricated office partitioning on the market.

Fundamentally most of the systems available are based on the use of self-supporting metal or timber uprights fixed at regular intervals with clear or solid panels fitted between. There is wide variation in their cost and standards of finish, and although most achieve the primary need of being quick to erect and easy to adapt, few are designed to work as an essential piece of business equipment.

Even so, the widespread use of partitioning systems reflects a change in the traditional concept of the office. The small back room and the executive's sanctum are fast disappearing and partial, or complete, open planning is being adopted in its stead. A breakdown of visual and hierarchical barriers is thought to promote better teamwork, simpler communication and easier regrouping. A modular partitioning system gives the office flexibility in planning and screening and can be altered, possibly by unskilled labour, in a few hours. While its capital costs are high, maintenance costs are normally lower than with a solid partition wall.

Few partition systems, however, acknowledge the difficulties that such complete flexibility raise in the design of lighting, telephone, heating and ventilating installations and in the provision of furniture. Most aim solely at providing a movable screen free from the encumbrances of essential services. A system recently designed by the Nicholson brothers specifically for the showrooms in Mortimer Street of The Wall Paper Manufacturers Ltd, goes some of the way towards remedying this fault. Its adaptability has been tested during several changes in the office and showroom layout and in consequence it will soon be produced for general use by Holland & Hannan and Cubitts Ltd.

An elegant blue grey anodised aluminium hollow section is used for the uprights which screw jack firmly between floor and suspended ceiling at 42-inch centres. Teak bracing panels fit between the uprights at desk level and are sufficiently deep to conceal the flotsam on a desk otherwise seen in silhouette through the glass panels above. The cross-braced hardboard ceiling panels fit within a teak grid and remove to give access to all high level services. Wiring for telephone points, light switches and socket outlets runs down the core of the uprights and terminates without fuss in special switchblocks at desk level. Doors pivot between floor and ceiling to avoid hanging on the slender uprights, and glass or teak faced panels are held by brass beading.

Although the strong character of the ceiling tends to dominate the exhibits in the showrooms at Mortimer Street, giving a confused and restless effect, such pattern could give interest to the usual anonymity of the average office. The difficult problem of sound reduction has been partly solved by using thick floor carpeting, but it might prove advantageous if some absorbent were used in the ceiling panels.

This new partitioning will offer one of the best looking 'off the peg' systems available and, in more utility finishes, will be competitive with other partitions. There is no question that it places proper emphasis upon the integration of screening, services and furniture. There is still scope for a fully working wall where shelving, cupboards, lighting, heating panels and telephones are united as part of a complete system, and the Nicholsons are in fact exploring this concept as a future extension of their existing design.



E. A. Entwistle, 58, London director of The Wall Paper Manufacturers Ltd, is an unusual mixture of historian and enthusiast for modern design. His influence on the development of modern wallpapers has been extensive - the architects' pattern books and the special service for architects having claimed much of his attention since he took charge of the London office in 1948. As a wallpaper historian he is an acknowledged authority on the subject and has assembled a large collection of early British and foreign samples. In 1944 he published an historic survey - *The Book of Wallpaper* - and is planning to produce a bibliography of wallpapers which should become a standard reference.



In the offices, L.C.C byelaw requirements and an existing air conditioning system dictated the use of large areas of clear glass and partial open planning. The dimensional discipline co-ordinating ceiling, floor, furniture and screening gives added distinction to the combination of teak,

plate glass and blue grey anodised aluminium. The screening is easily demountable but individual panels can only be changed by removing a side upright first. The system, now to be produced generally, is shown here in the offices of The Wall Paper Manufacturers Ltd.



▲ All desks abut a teak bracing rail which conceals desk flotsam and protects glazing. With one exception all desks and cabinets were specially designed and made by Heal's Contracts Ltd. Wiring conduits for telephones, light switches and socket outlets run within the core of the aluminium extruded upright and terminate in special teak switchblocks at desk level.

◀ In the showroom the standard aluminium uprights used in the offices support wallpaper display screens. (A cross-section of the extrusion is shown with the title on the facing page.) The 42-inch module based on double wallpaper width facilitates such display while ceiling panels are used for spotlights.



A weekly design meeting at Walker & Hall Ltd. From left to right: Peter Inchbald, director; Roy Bond, development engineer; David Mellor, consultant designer; and J. H. Ward, works manager, meet to check the progress of new designs.

Pride and planning

The designs illustrated on this page have been introduced by Walker & Hall Ltd since 1956, when Peter Inchbald became director in charge of design (DESIGN April page 63). Before then the firm's production consisted mainly of miscellaneous traditional patterns in cutlery and silverware.

Soon after he joined the firm Mr Inchbald set out to reorganise its design policy. He appointed David Mellor, who had recently left the Royal College of Art, as consultant designer, and all the patterns shown here are a result of this collaboration. The *Pride* cutlery (right foreground), the *Pride* tea-service (left background) and the pewter candlesticks and dish (background) will form the basis of a series of new designs for the domestic market. Mr Mellor has designed a display stand for use in retail stores, and Edward Veevers is working on a range of packs. The *Fanfare* tea-service (centre right) and the *Fanfare* condiment set (centre) are intended for the catering trade—a positive step towards raising the standard of both the quality and the design of hotel hollow-ware.

Naturally these new designs still form only a part of the firm's total production, but Mr Inchbald has now set up a product planning committee to speed up his new policy. The committee, of which he is chairman, consists of David Mellor, the works manager, the sales manager and the cost accountant. It meets to consider which of the old ranges the firm can afford to abandon, and decide what new designs to bring in. These meetings also determine Mr Mellor's brief. Although the system has been working for less than a year, Mr Inchbald feels it has well proved its worth. Future projects for the firm, which range from new designs in stainless steel to a new look for its showrooms promise to be as positive and well thought out as work already in hand. G.E.N

Left background: *Pride* two-pint tea-service in EPNS, with nylon knobs and handles, £2 2s 3d. Centre left: ashtray in sterling silver, price from maker. Left foreground: part of the *Spring* range of stainless steel cutlery, designed and manufactured in conjunction with Robert Welch and J. & J. Wiggin Ltd; the alternative black nylon handles for the knives are a recent innovation, price from maker. Centre background: candlesticks and dish in pewter, price from maker. Centre: *Fanfare* condiment set in EPNS; the salt and pepper pots have melamine bases, and the mustard pot is lined with melamine, £2 12s 9d. Right foreground: *Pride* cutlery in EPNS (a *Design of the Year* for 1957), £2 18s (6-piece place-setting). Centre right: *Fanfare* hotel hollow-ware in EPNS with nylon handles and knobs, price from maker.





*ergonomic design assists
the human operator*

Testing missile monitors

KAREL NEWMAN

Karel Newman, right, the author of this article, has been with EMI Electronics Ltd for five years, and is now a project engineer designing telemetry test equipment. Philip C. Scott, left, also of EMI, was the mechanical designer of the new equipment discussed here.



The conventional box form of electronic equipment is a natural result of the methods of design and construction for small-scale production. Controls and indicating devices are mounted on a vertical front panel, the main circuit components are mounted on some form of chassis attached to the front panel, and the unit placed in a metal box to afford protection and electrical screening. This arrangement provides the electronic designer with a simple solution to circuit layout problems and the mechanical designer with a unit which is easy to manufacture.

However, the requirements for some present-day applications have necessitated the addition of an engineering psychologist to the usual design team of electrical and mechanical engineers. The main psychological factor to be considered is the rapid increase in errors, due to operator fatigue, when an operator has to watch an indicator for a long period. Examples of the methods used to overcome these problems for specialised telemetry test equipment are shown here.

Telemetry test gear

There are many instances where it is necessary to obtain measurements from equipment located in inaccessible positions. Typical examples are instrumentation in earth satellites or lunar probes, and temperature and pressure measuring equipment lowered to the bottom of oil boreholes. At present, however, guided missile research makes the most use of such measurements, because it is important to determine how the various parts function during flight.

The system normally used in guided missiles is that

of radio telemetry. This consists of a small radio transmitter in the missile, and receiving equipment installed at a suitable terminal point where a permanent record can be made.

To achieve the high accuracy and reliability required for the transmitting equipment all components have to be submitted to exhaustive tests. As an aid to its development work and production of this class of equipment, EMI Electronics Ltd has developed some special test gear.

Speed with efficiency

The radio transmitter contains a number of sub-assemblies: a typical sub-assembly is the multiplexer built around a special 24-contact motor-driven switch.

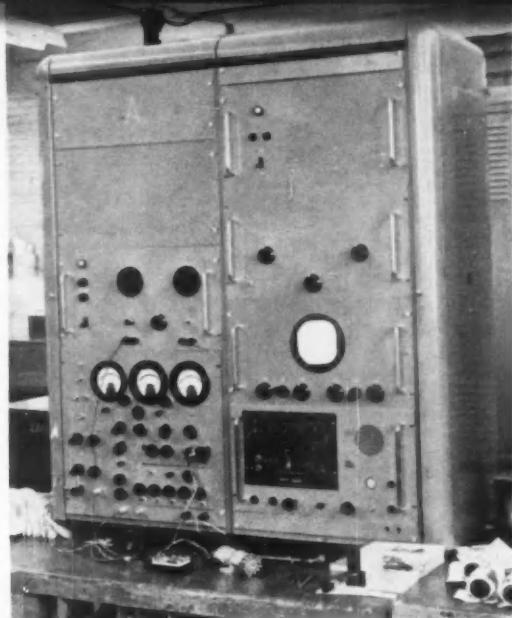
In the original equipment, TOP RIGHT, multiplexers were tested individually. As these have to be continuously tested for a period of four hours, only two could be tested in an eight-hour day. In addition the operator had to watch the face of a cathode ray tube for long periods. This resulted in operator fatigue and erroneous observations.

The small output from each multiplexer testing unit caused production bottlenecks. In a new design, therefore, the most important factor was the need to increase output. Simultaneous testing could not be carried out with the previous design because faults could only be detected by continuously displaying the multiplexer output signal. Provided an automatic fault detector could be incorporated, it would only be necessary to display the multiplexer output when a fault occurred. An investigation showed that failure could be related to the value of dynamic resistance, ie the resistance of the contacts while the multiplexer is rotating. This method was used in the new design.

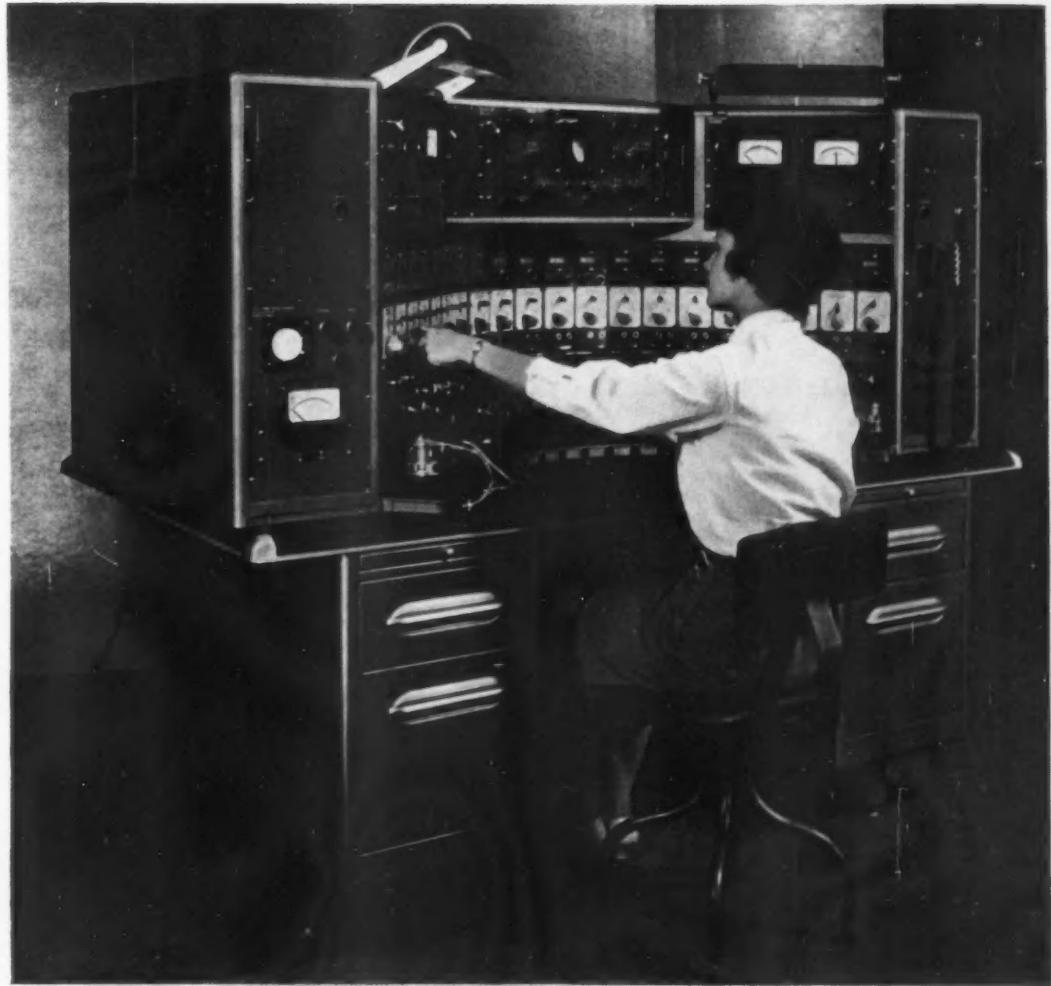
The illustration, RIGHT, shows the layout of the new console designed to test 20 multiplexers simultaneously. Each is connected to its own amplifier which is preset to operate the warning lamp at the maximum permissible value of dynamic resistance. If this value is reached a red indicator lamp lights up on the panel of the amplifier associated with the faulty sub-assembly. By operating a key on the amplifier the multiplexer output is displayed on the cathode ray tube for investigation. The same key allows other important parameters to be measured. After investigation the faulty multiplexer is replaced by a new unit, the amplifier is reset and operation is restarted. The running time for each multiplexer is shown on a counter.

Special attention has been paid to the comfort of the operator. All controls which the operator normally uses can be reached without moving from the chair. The chair can be adjusted to suit the operator.

A restful colour for the background was chosen to minimise eye fatigue, and white working surfaces were included behind the main controls to utilise the phototropic effect inherent in human sight. To eliminate shadows caused by surrounding lighting, two fluorescent lamps were fitted. These illuminate the working surface without impairing observation of the cathode ray tube.



This laboratory-type gear presents a complex arrangement of knobs and dials, involving a lengthy setting up procedure. Such an arrangement leaves much room for operator errors, and, in addition, limits production capacity.



Suitable design of both equipment circuitry and mechanical layout alleviates much of an operator's tedium, with a consequent reduction in erroneous observations. Here, if a fault occurs on any of the 20 sub-assemblies during a four-hour test, a warning lamp lights automatically to indicate the faulty unit. Simply by pressing a key on the console, the operator is able to check the automatic fault-finder by a display on a

cathode ray tube. A previous test equipment required constant watch on the face of a cathode ray tube, thus, as well as resulting in operator fatigue, only one sub-assembly could be tested at a time and a production bottleneck was created. Operator comfort, always of prime importance, is much improved on E.M.I.'s new equipment. The chair is adjustable to suit the operator and all controls are well within reach.



DESIGN ANALYSIS 14

Lavatory basin

DESIGNER W. M. Goslett for Alfred Goslett & Co Ltd. £7 (white); £9 15s (other colours) including waste fitting and valves.

The subject for analysis, the Cygnet lavatory basin, was installed in the home of a tester and was used under conditions of normal family life for a period of six weeks. The author reports on his discussions with the testers and on his own examination and use of this unusual design. The manufacturer's comments on this report are published at the end of the article on page 46.

Several new lavatory basins have appeared on the market in recent years. One received a *Design of the Year* award in 1958 and most reveal some attempt to express the plastic qualities of the material in forms which are free and flow easily from one plane to the next. Though the solutions vary in both character and success, they are a welcome departure from the angular designs that still dominate the showrooms of the majority of builders merchants.

The *Cygnets* was chosen for this article from among these various new designs because its asymmetric shape suggested that the designer had looked at the problem with a fresh eye and had arrived at a solution which he believed would suit day-to-day requirements better than more conventional designs. In the user trials carried out for the purpose of this article we have attempted to find out how far these design objectives have been fulfilled. It should be made clear that the *Cygnets* is not a luxury basin, but is a low-priced piece of equipment of the type that will go into any small bathroom. It is made of vitreous china which, although moderately new, is now commonly accepted for goods of this kind.

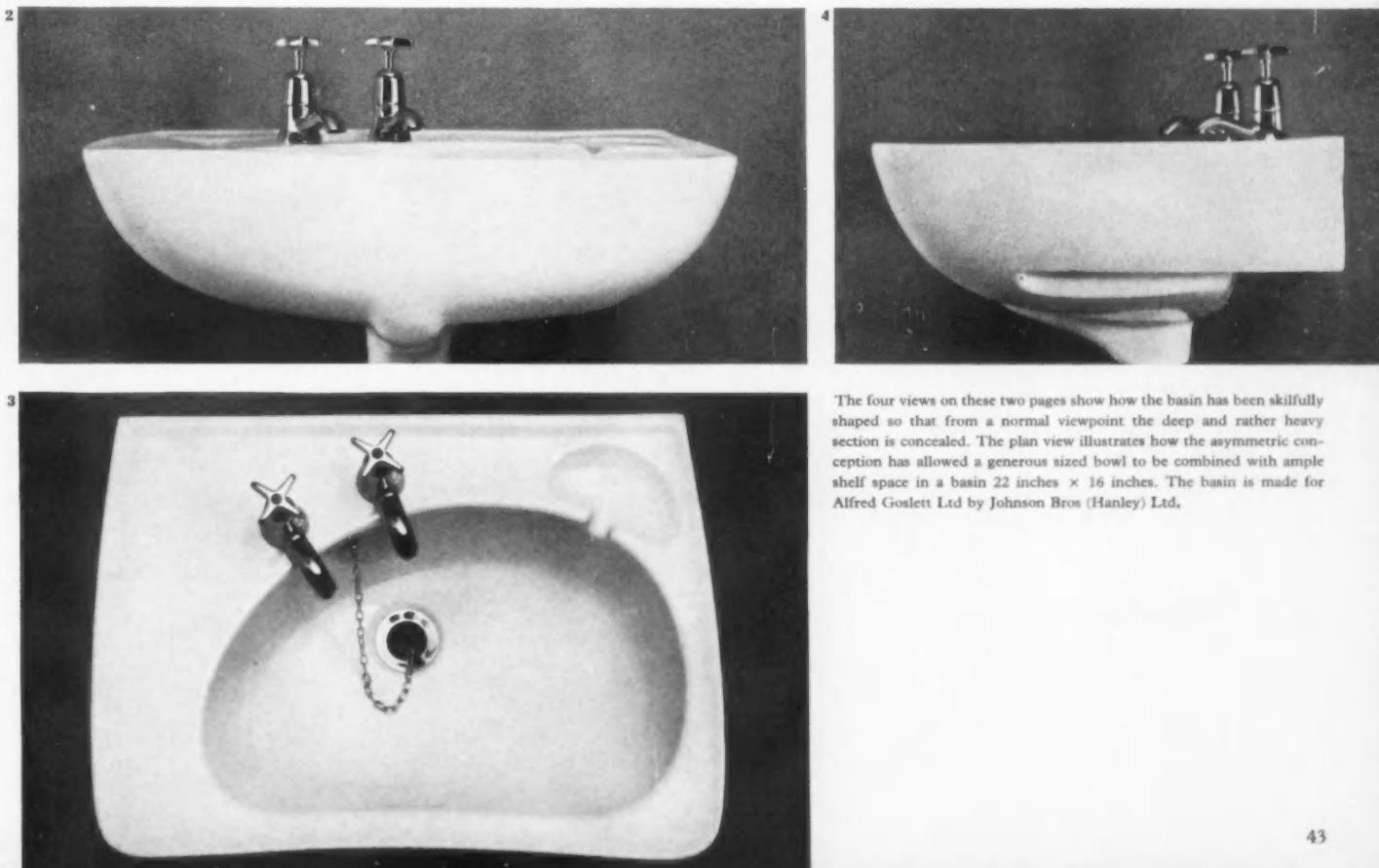
The industry Before we consider how the *Cygnets*

differs from the usual basin, it would be valuable to discuss briefly the background to the developments of the modern lavatory basin and the washing habits that have grown up with it. The jug and bowl origin has given us a more or less spherical bowl (while sinks, for example, have stemmed from hewn stone and keep their rectangular form). Our polite washing habit of using a half filled bowl of static water, is another inheritance. Most people usually wash under a running tap, but neither the bowl nor the brassware in the majority of modern fittings are designed for this use.

Manufacturers, on the whole, have hardly reacted to this change of habit, and lavatory basins generally are still only one stage away from an inset wash-stand bowl with water supply added. At the same time, manufacturers are bedevilled by the bewildering variety of regulations put out by the large number of water authorities; and anybody in the sanitary appliance business must obviously attempt to meet as many of these regulations as possible.

The British Standard recommendations,* by fixing the positions of water supplies and waste, have made it easier to fit a wash basin or to change to a new one. To

*BS 1188:1944 Ceramic Lavatory Basins, 3s.



The four views on these two pages show how the basin has been skilfully shaped so that from a normal viewpoint the deep and rather heavy section is concealed. The plan view illustrates how the asymmetric conception has allowed a generous sized bowl to be combined with ample shelf space in a basin 22 inches x 16 inches. The basin is made for Alfred Goslett Ltd by Johnson Bros (Hanley) Ltd.

illustrate these positions the British Standard uses a diagram of a utility form, that is almost a parish design of calculated improvidence and inconvenience. Although forming no part of the standard, this sketch has been so widely adopted as to constitute a standard design.

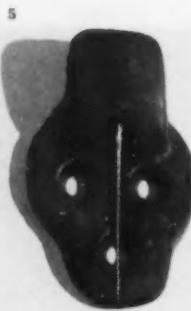
Appearance The visual impact of the *Cygnets* is first apparent in the extreme whiteness of the glaze which is close in colour to Vitrolite and makes the other white equipment of the bathroom look grey by comparison. There are alternative choices of eight coloured bodies. While it must be admitted that the technical problems of producing good colours in sanitary ware are very great, the range in which the *Cygnets* is produced lacks subtlety, clarity and freshness. Coloured ware will dominate a decorative scheme, and needs a positive clarity if it is to compete with a good white.

In shape the rather lumpy view of the front, 2, caused by the deep bowl and aggravated by the front overflow, is not apparent at the high viewpoint, 1, from which the basin is normally seen in a rather small bathroom. The absence of the usual litter of brackets and connections from all reasonable viewing positions makes this high three-quarter view most attractive.

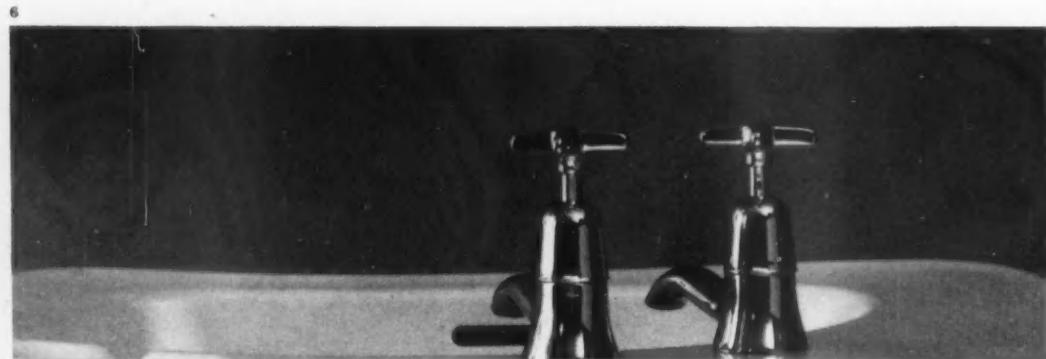
The form starts with an interesting tension between plan and side view, the side tapering towards the front to emphasise the cantilever, and the plan widening towards the front. This helps to fine down the front corners, which are cut away sharply from the sides so that the actual thickness is not apparent.

The outline of the bowl is a vigorous shape that is not easy to contain in a near rectilinear plan, but the two have been combined here with some success, 3. It is always the shape of the bowl, rather than the shelf, that chiefly attracts attention, and unless the design is handled with assurance the bowl will float, amoeba like, in the plan. The outer line of the basin is attractively crisp, through good detailing of the slightly raised outer edge. The difficulty remains, however, in the plan of the bowl. Internal curves must necessarily be generous, for ease of cleaning, but in this case there is a certain slackness that makes the shape less precise, and less firmly positioned in consequence. One solution might have been to retain the easy curvature and at the same time to define the points at which the change of curvature – or the change of plane – was most significant, by using closely related multiple radii.

Tests on installation and use provide favourable comment



5
Z-plates screwed to the wall engage a flange at the back of the basin to provide a secure and invisible fixing. The introduction of plates with slots instead of the screw holes as shown ABOVE will increase the ease of installation.



The soap sinking which echoes the bowl shape might have had more vigour as a shape in its own right. The concave front edge of the basin was thought to be too suggestive of collapse during firing in the kiln. The front edge of a basin is a place that has been particularly susceptible to deformation in manufacture since the basins are stood on their backs in the kiln, and allowances have to be made for changes of shape during firing. Technically minded observers might well think that the concave front edge is accidental rather than intentional.

Installation The installation of the *Cygnet*, which in the home of the tester replaced a parish pattern similar to the one shown in the British Standard specification, was found to be reasonably simple. Since the waste outlet, which is in the centre of the bowl, conforms to BS requirements it was possible to fit the basin to the existing trap without modification other than to the supply pipes for the taps. The basin is hung direct on two Z-plates which are screwed to the wall. These engage a flange at the back of the moulding so that the basin is supported by the strength of its material, providing a fixing which seems perfectly secure and has the

great advantage that it is invisible. During fitting, it was found that the location of the lugs was slightly out of true so that some filing of one of the lugs was necessary after it had been screwed in position. It is understood, however, that the manufacturer is to produce the lugs with slots rather than screw holes to allow for adjustments of this nature. The taps having been fitted, the connections were made after the basin was in position, but it was found difficult to get adequate purchase on the tap connectors. In view of this it was considered that the provision of extension pieces on the connectors would be extremely desirable.

In this instance the basin was fitted to an existing tiled wall and the channel formed between the radius of the top back edge of the basin and the wall was filled with mastic. But unless this mastic filling is rather wide a slight channel will remain which will accumulate water. This problem, which results from the method of firing, is overcome if the tiles are applied afterwards and come down on to the back edge of the basin. But this brings an additional problem of fitting the tiles around the basin's curved underside.

The basin in use Once fitted in a small bathroom

Photographs 1, 2, 3, 4, 5 and 6 by Harriet Crowder; 7 and 8 by John Garner.



The basin was used by a family for a period of six weeks. Ease of cleaning and the self mixing effect of having the taps close together were particularly commended. Also the placing of the taps to one side was found to be an advantage in hairwashing.

the basin justifies itself in ways that are not apparent when it is viewed in isolation. This is what one might expect of a well considered design, for no piece of domestic equipment is complete until it is in use on its proper site. We found that our impression of the basin changed materially when it was seen in its ultimate context. It is 22 inches \times 16 inches, but when in place in a bathroom that was 5 ft wide it seemed to be quite large.

Some of the testers wondered if the asymmetry of the design had been handed the wrong way round. While the shelf space was found to be extremely useful for shaving gear and similar items, the natural inclination of a right handed person is to pick up and put down such equipment on the right hand side of the basin. Though the necessity to reach across the basin was considered to be no great disadvantage in most toilet operations, it was felt that the opportunity to try a basin with the shelf space on the right hand side might well prove decisively the advantage of this arrangement.

The shelf and the entire top surface have been carefully graded so that they are self draining without the slopes being steep enough to cause objects to slide. The soap sinking, however, seems unnecessarily shallow, and although it is adequate to hold the soap and is easy to clean out, soap tends to stick to the surface more than on the old basin used by the testers.

The fairly steep sides of the bowl give a good working depth of water with a minimum quantity, and the drainage at the waste is good, so that the rinsing or self-cleaning of the basin as a whole is much better than usual in a small piece. In tests with sooty deposits it was difficult to make the dirt stick onto the basin in any revealing pattern and the testers considered the basin to be exceptionally easy to clean. The space between and around the taps requires more attention, however, and cleaning here has to be rather deliberate.

The taps normally supplied with this basin are poorly detailed, and their lack of style is apparent on this basin (though they might look comparatively fine on a parish design). The plug chain on the sample tested (but not on the sample supplied for photography) was of the kind that disappears through the back, and is a standard product made by H. H. Bridge which can be fitted to most basins. This is a most useful attachment, for one does not need to wrap the plug round a tap to keep it out of the bowl.

The shelf has, of course, encroached on the potential size of bowl, but it is a considerable advance on earlier Continental side-shelf designs in that the bowl has been designed around useful space. For effective usable space for vigorous hand washing, and face or hair washing, the bowl was found to be remarkably convenient; and even when full to the brim it did not easily splash over. The only disadvantage of note seems to be that the concave front edge to the bowl is unexpected, so that during hair rinsing there was a tendency at first to bump one's nose.

The fact that the taps are close together provides effective self-mixing in that there are not separate pockets of hot and cold water as is common in shallower basins where the taps are widely spaced. The placing of the overflow in the front inside surface of the basin makes it unusually inconspicuous. It was found to be adequate even when both taps were turned full on.

Conclusions On balance, the *Cygnets* seems to be a most useful move from a worn out orthodoxy. It works well for most operations, and it looks well from nearly all viewpoints. It is designed in terms of a moderately plastic material, and shows every sign of having been shaped in the round, rather than on a drawing board.

The break from conventional symmetrical designs is to be commended though we believe the possibilities of this approach have by no means been fully explored.

The manufacturer comments

We find the design analysis of the *Cygnets* basin to be particularly interesting because this basin is the third in the succession of Swanlyne patterns, and therefore there has been the opportunity to learn from earlier productions, and to reveal fresh problems.

It is noted that the initial design criticisms in the article are extensively answered by the subsequent findings on the practical use of the basin. To a considerable degree this reflects the history of the development from an apparently ideal design to its practical production counterpart. Thus the rather tentative criticisms of bowl shape are answered by the fact that on performance tests it is found to be exceptionally good for both washing and ease of cleaning. More space between the taps to eliminate the "deliberate" cleaning would reduce the useful degree of water mixing which their proximity provides. The concave front to the bowl is a calculated recognition of potting problems at this point with the practical advantage of fitting the front to the shape of most users.

The taps are not part of the design (on which any

standard pattern can be used), but ease of fitting is essential and the suggested modification is valuable.

Which is the best shelf position? Overall space available in a 22 inch \times 16 inch basin is severely limited from the outset. Having met the primary problem of adequate bowl space the problem of shelf space and location is even more acute. The right hand yields tooth brush, razor, sponge, and applies lotions and creams. The left hand, a sort of plumber's mate, produces tooth paste, tumbler, shaving cream and holds creams and lotions for the right hand to apply. Even so, hands must cross. But the strong natural inclination is to use the right hand, and the right hand side of the basin should therefore be the operations sector - wide, clear, uncluttered. It follows that the left hand side should logically be the storage sector.

Finally, the white *Cygnets* is made in Glowite vitreous china: that this outstanding whiteness sets a new standard and, in addition to the appearance and advantages in use, combines to show up the long accepted limitations of standard designs, is indeed encouraging.



Wallis Goslett, 46, who designed the *Cygnets* basin is photographed here in the showroom of his firm in Charing Cross Road, London. He believes that the whole field of ceramic sanitary ware design has been crying out for attention for a long time.



Henry Dreyfuss, left, in The Design Centre with Walter Dorwin Teague

American leads

The president of American Export Lines passed a note across the table: "Would you have time to do two ocean liners?" "Yes", wrote the American consultant designer and so, in this secretive wartime atmosphere, Henry Dreyfuss began another phase of his career.

Equally impressive opportunities have opened before Walter Dorwin Teague who, like Mr Dreyfuss, has recently visited The Design Centre. Both founder members of the American Society of Industrial Designers and pioneers since 1929 of the consultant design profession, Mr Teague and Mr Dreyfuss are well worth listening to. Their practices are not comparable; Mr Teague has a staff of 120, including six partners and about 80 creative designers. When working for a large company he prefers to place a "task force" on the company's premises. His firm has just opened a branch office in Puerto Rico, at the invitation of the island's administration, to work, initially, on offices and supermarkets. But Mr Teague has no wish to go further and set up a European office.

Mr Dreyfuss agrees. America, he feels, is quite large enough for his operations, though he has been persuaded to work for European firms, including the British Hoover company. There are 50 people and five partners with Mr Dreyfuss in what he insists is a "single office" split between New York in the east and Pasadena in the west. His office designs for only 15 clients at any one time, a fact which indicates the size of the clients (eg Bell Telephone, Lockheed Aircraft) and the extent to which he and his partners can give each a personal service. But Mr Dreyfuss is quick to stress that people are his real clients: "Who is going to

use it?" is the first question asked on a new job. He backs this up with the full-time services of an ergonomist, who has been on his staff for 15 years. For a consultant designer Mr Dreyfuss pays an unusual amount of attention to human factors; the title of his book *Designing for People*, is no accident.

Both consultants are interested only in giving complete design services to their clients; they prefer to begin when the job itself begins. To cope with this Mr Teague has divided his office into groups: product design and product engineering ("frequently clients need extra engineering staff when a new design is going into production"); packaging and company identification (house style); architecture and interiors. Mr Dreyfuss also offers the "total" service, employing specialist designers in all categories.

Asked where new design talent can be found, Mr Teague said that so far in America there was no satisfactory method of training industrial designers. He thought that a full architectural course coupled with some engineering training was the best background for the designer. Mr Dreyfuss also found it difficult to recruit the right talent, though his office takes on a few of the best students part time.

Turning to The Design Centre both consultants were deeply impressed. Wistfully, Mr Teague remarked: "In the Merchandise Mart in Chicago you could walk a whole day and not see as much good design as in The Design Centre". Mr Dreyfuss, recalling the short career of a rather different good design display in America, remarked approvingly that the Centre "was not too pure".

Measurements for designers

Designers often complain that adequate sets of human measurements are not available to them. This article provides two sets – the heights and weights of the adult population of Britain, and shows how these can be used when conducting trials for new equipment.

BRIGID O'DONOVAN

Sets of human measurements are on the whole not much use to the designer; they require too much interpretation in the light of physiological and statistical knowledge. It is more satisfactory to present measurements in the form of equipment dimensions for designers to work to.

For example, the recent BS recommendations for non-adjustable office chairs and desks* (DESIGN July page 59) do not give any information about the dimensions of seated workers, because these dimensions alone are not enough. The sort of postures that lead to the least fatigue and pressure are physiological matters, requiring scientific interpretation, and are at present outside the experience of the designer or engineer. Again when these physiological factors have been determined, picking out the best sets of measurements for chairs and tables to give the desired result is a statistical task for which designers are seldom equipped.

At present full sets of furniture and equipment dimensions are not available, and the designer has to proceed, as in the past, by trial and error. For example, the BS recommendations about the office chair are reasonably exact when referring to the seat, but rather more vague when referring to the backrest, where more research is needed. In any case, whether the information is complete or defective, the designer will want to try out his designs on the range of people to be served, and there are two sets of measurements which would be useful to him – the heights and weights of the population of Britain.

The designer will often be working in a small drawing office or prototype shop. It will probably be staffed almost exclusively by men, with perhaps one or two women clerks. The whole staff may be above average in social class and intelligence, and therefore most of them will be above average in height. Those concerned in design and sales, and possibly one or two craftsmen, will probably be asked to give their opinions; even the women clerks may be asked for theirs. No attempt will be made to get a realistic selection of people even

*BS 3079 : 1959 *Anthropometric Recommendations for Dimensions of Non-adjustable Office Chairs, Desks and Tables*, 4s.

approximately covering the height and weight range of the population at large. Yet, if proper information were available, such people could be collected from any medium sized factory in half an hour.

Where the designer does know an average man if he sees one (he will almost certainly fail to recognise an average woman), he may be over-influenced by his reactions. If a design is made to suit the average man it may not fit 35 per cent of the male population, not to mention 65 per cent of the women. Furniture and equipment should be designed to fit the largest possible range of people, and all the necessary compromises should be worked out to this end. Even when very little is known about the physiological aspects or requirements of users, trying out equipment on a full range of people of different heights and weights will show up faults and suggest adjustments.

Tables and surveys

Unfortunately no central agency has been charged with ascertaining and preparing a set of relevant figures for the British Isles. However, a number of good sized surveys have been carried out which cross-check reasonably well, and the tables provided with this article can be used with confidence. The following publications have been used as a basis for the tables:

Clements, E.M.B. and Pickett, Kathleen G., *Stature and Weight of Men from England and Wales in 1941*, *British Journal of Preventative and Social Medicine*, Vol 11, No 2, 1957.

Clements, E.M.B. and Pickett, Kathleen G., *Stature of Scotsmen aged 18–40 years in 1941*, *British Journal of Preventative and Social Medicine*, Vol 6, No 4, October 1952.

Kemsley, W.F.F., *Body Weight at Different Ages and Heights*, *Annals of Eugenics*, Vol 16, Part 4, 1952.

Women's Measurements and Sizes, a study sponsored by the Joint Clothing Council, HMSO 1957.

Although there may have been a very slight continuous upward trend in heights since 1941, this will not alter the usefulness of table A (page 49), which is based on the mean height of conscripts (mostly under 40) in

Table A

Approximate percentages of the population of different heights: average for all districts and classes in Great Britain

		men	women
6 ft	2 inches and above	1	
6 ft	1 inch	1	
6 ft		2	
5 ft 11 inches		5	
5 ft 10 inches		8	
5 ft 9 inches		11	1
5 ft 8 inches		13	2
average man ➤	5 ft 7 inches	15	4
5 ft	6 inches	14	8
5 ft	5 inches	12	11
5 ft	4 inches	8	15
average woman ➤	5 ft 3 inches	5	16
5 ft	2 inches	3	15
5 ft	1 inch	1	12
5 ft		1	8
4 ft 11 inches			5
4 ft 10 inches			2
below			
4 ft 10 inches			1

1941 (reservists and men older than call-up age had a lower height). It is most likely that the mean height of 5 ft 7 inches is valid today; the women's height was determined more recently.

High society

Men (and presumably women) are slightly taller in the south, and get shorter towards the north. In Wales they are shortest of all. However, the district variation is small, and except for Wales, does not account for more than about a $\frac{1}{2}$ inch. The social class influence is greater. Classes I and II of the Registrar General's five-class scale for the same district are $1\frac{1}{2}$ inches taller than Classes IV and V. The Registrar General's 1951 classification, which was used by Clements and Pickett, for England and Wales, is as follows:

- Class I Professional occupations (1 million)
- Class II Intermediate occupations (5 million)
- Class III Skilled occupations, clerical and manual ($15\frac{1}{2}$ million)
- Class IV Partly skilled occupations (5 million)
- Class V Unskilled occupations ($3\frac{1}{2}$ million)

There are approximately equal numbers of men and women in each class (including housewives).

There is not enough difference between the heights of Classes I and II to enable these to be considered separately, nor between Classes IV and V. Table C (page 50) shows the rounded means for men's heights by class and district. A table (D) on the same lines as the height table for the country as a whole has been constructed for Classes I and II. This class contains some taller sub-groups, such as public school men from Oxford and Cambridge whose mean height is probably about 5 ft 10 inches. (Intelligence as well as social class influence height.) The difference in women's mean heights by social class is probably not more than $1\frac{1}{2}$ inches or even less, between Classes I and II, and IV and V.

Use of the height table

There are a number of interesting points to notice about the height table, A.

In the first place, there are comparatively few people

Table B

Approximate mean weights for men and women of different heights at ages 32 (plain type) and 57 (italic type) at three points in the distribution

	men	Height	5th Centile	Mean	95th Centile
6 ft		9 st 8 lb	11 st 4 lb	13 st 7 lb	
		9 st 6 lb	11 st 7 lb	14 st 7 lb	
5 ft 9 inches		8 st 12 lb	10 st 7 lb	12 st 8 lb	
		8 st 11 lb	10 st 10 lb	13 st 7 lb	
5 ft 6 inches		8 st 3 lb	9 st 10 lb	11 st 9 lb	
		8 st 1 lb	9 st 13 lb	12 st 6 lb	
5 ft 3 inches		7 st 7 lb	8 st 12 lb	10 st 10 lb	
		7 st 6 lb	9 st 2 lb	11 st 5 lb	
5 ft		6 st 11 lb	8 st 1 lb	9 st 10 lb	
		6 st 10 lb	8 st 5 lb	10 st 4 lb	

women

	Height	5th Centile	Mean	95th Centile
5 ft 8½ inches		8 st 0 lb	9 st 13 lb	12 st 8 lb
		8 st 0 lb	10 st 11 lb	14 st 2 lb
5 ft 5½ inches		7 st 6 lb	9 st 4 lb	11 st 12 lb
		7 st 7 lb	10 st 2 lb	13 st 8 lb
5 ft 2½ inches		6 st 13 lb	8 st 9 lb	1 st 2 lb
		6 st 13 lb	9 st 8 lb	12 st 13 lb
4 ft 11½ inches		6 st 5 lb	8 st 0 lb	10 st 6 lb
		6 st 6 lb	8 st 13 lb	12 st 4 lb
4 ft 8½ inches		5 st 11 lb	7 st 5 lb	9 st 10 lb
		5 st 13 lb	8 st 5 lb	11 st 10 lb

At the 5th Centile, 4 per cent of the population are lighter, and 94 per cent heavier than the figure shown. At the 95th Centile, 94 per cent are lighter and 4 per cent are heavier. These tables have been compiled from *Annals of Eugenics*, Vol 16, Part 4, 1952.

at the extremes. If it is either physically or economically impossible to make the equipment fit 100 per cent of the population, then some must be cut out. For example, five per cent each end may be omitted; this may make a big difference to the economics of production, while inconveniencing only a small number of people. What can be done will depend on what is being designed. For example, doors *must* fit the tallest, but shelves need not be within the reach of the shortest.

The second point to notice is that people are shorter than is generally supposed. This is probably why chairs and tables have been too high for so long. There is a tendency for equipment to be wrongly sized because the people who take managerial decisions are above average in height.

Third, it will be observed that women are on the average 4 inches shorter than men. In equipment designed for both men and women, both should be used as guinea-pigs. There is, of course, one very important point about women — men's heels are 1½ inches; but women's may be ½–3 inches. At the moment, in offices, the most common height is 2 inches. Women's heels make a big difference to their standing height and reach, an even bigger difference to the height of their chair seats, and lessen the difference between men and women. When seated, heel height makes no difference to arm reach, eye level, height of back or head.

Use of the weight table

Weights are not distributed evenly round the mean like heights. Table B is abstracted at certain points from a more complete one, and gives a broad picture. It shows how weight increases with height and with age. The designer need not attempt to get guinea-pigs of exactly the weights shown, as long as they are of approximately light, middle and heavy weight. As far as possible they should be short and light, medium height and medium weight, and tall and heavy. Remember that there are very few at the extremes — there may be no 6st 10lb or 14st 7lb, men in the factory, but it should be possible to find several approximately 8st 3lb and 13 st 13 lb. People may be asked to state their weight, as great accuracy is not required.

Conclusions

In using the tables, certain other points should be considered. First, the guinea-pigs should be those who already use or are about to use the furniture or equipment. To take an extreme example: only car drivers can try out the driving position of cars but most people should try a passenger position. Second, attention should be paid particularly to the extremes of the distribution. Plenty of short and tall people should try out the equipment that is being designed, in case a few modifications will accommodate them. Third, as much time as is economically possible should be allowed for trials. Fourth, the designer should use his own eyes, and not rely entirely on the opinions of the guinea-pigs. Do they look comfortable and are they working well?

Lastly, for the really complicated jobs, such as car interiors, the manufacturers should call on professional help in the anthropometric field. There are just too many inter-related considerations for the layman to be able to solve the problem alone.

Table C

Approximate differences in mean height of men by social class and district in Great Britain

5 ft 8½ inches I & II
S. East and
S. West

5 ft 8 inches I & II
All other
districts
except Wales

5 ft 7½ inches III
S. East
S. West, East
& Midlands

5 ft 7 inches I & II
Wales
North &
Scotland

5 ft 6½ inches III
Wales
the rest

Approximated from table III in *Statute of Scotsmen* and table IV in *Statute and Weight of Men from England & Wales in 1941* (see page 48).

Table D

Approximate percentages of men of different heights in classes I and II of the Registrar General's five class scale.

6 ft 3½ inches and above	1
6 ft 2½ inches	1
6 ft 1½ inches	2
6 ft ½ inch	5
5 ft 11½ inches	8
5 ft 10½ inches	11
5 ft 9½ inches	13
5 ft 8½ inches	15
5 ft 7½ inches	14
5 ft 6½ inches	12
5 ft 5½ inches	8
5 ft 4½ inches	5
5 ft 3½ inches	3
5 ft 2½ inches	1
5 ft 1½ inches	1



overseas review

France Consultants in operation

Two design organisations for products, graphics and interiors are flourishing in Paris. Both were started after the war and their recent expansion has significantly coincided with the formation of the Common Market.

Technès

The first, Bureau d'Etudes Technès, was founded by the late Jacques Viénot in 1948, and is now controlled by his son Henri Viénot, a time-and-motion study consultant. Technès is concerned largely with product design ranging from a fork lift truck to a camera, but it also provides packaging and graphics generally. Apart from M. Viénot, who undertakes administration and liaison with clients, there are four designers and six draughtsmen. The firm is also equipped with modelmaking and photographic departments. Current work includes a typewriter, tape recorder, refrigerator, washing machines, a calculator, an iron, and so on.

When Jacques Viénot began his practice he submitted perspective drawings without full working details, on the

Jacques Viénot



Henri Viénot



Dictating machine with hand microphone for Polydict, France.





assumption that the clients would carry out for themselves the further work of translation. It was soon realised that the resulting difficulties and delays must be avoided and he therefore recruited engineering draughtsmen so that Technès could offer a complete design service. There is now close contact between the designers and the manufacturer throughout the development of a product. Although most of its clients are in France, Technès has designed for firms in Belgium, Switzerland and the U.K.

Compared with the best product design in Europe, work by Technès reaches a high standard. The lines are decisive, the shapes clear and uncluttered. As in so much European work of this kind the best influences from Italy and the not so good clichés from America can be detected as surely as they have here prevented the designers from developing a *style française*.

Cinematograph projector for Pathé, France.

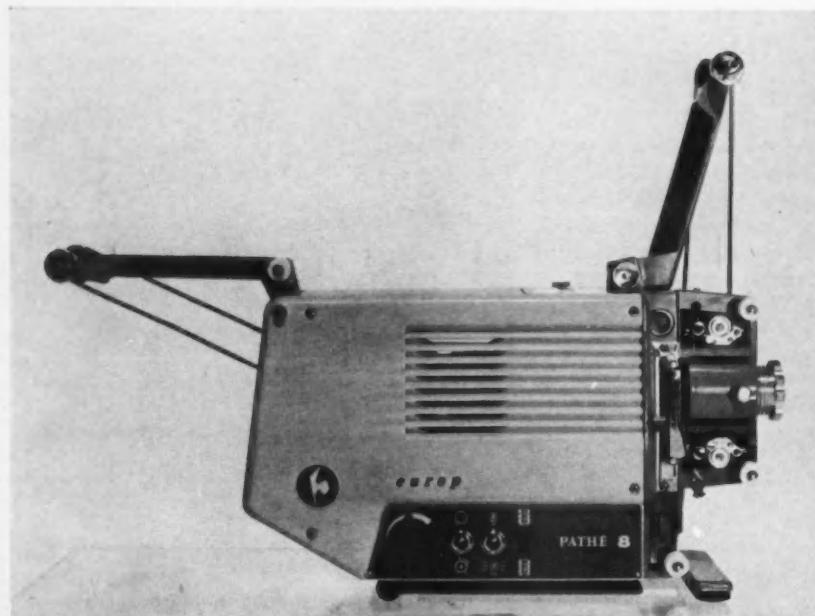
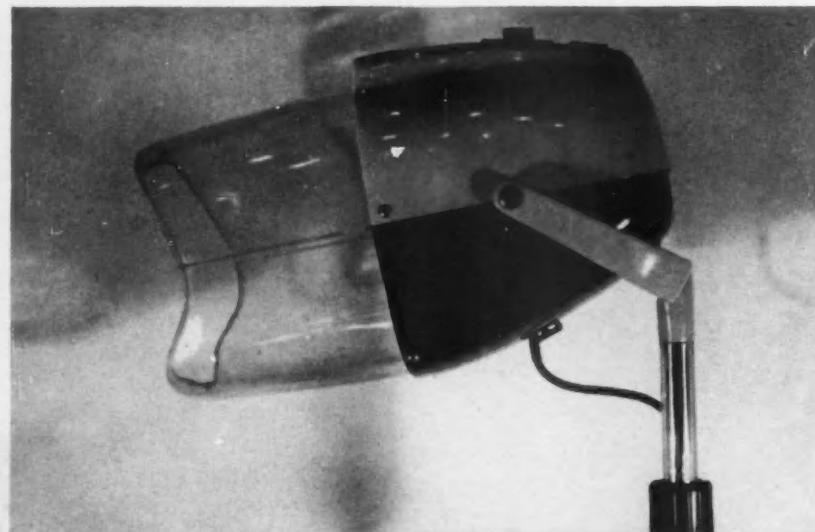
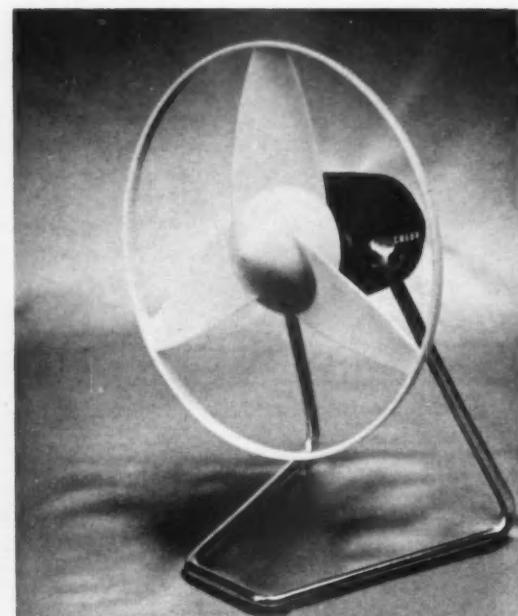


Table fan for Calor, France.



Hair dryer for Vitapointe, France.

CEI

The second organisation, Compagnie de l'Esthétique Industrielle, was founded by Raymond Loewy in 1952, to provide a design service in Europe which is independent of his American company, Raymond Loewy Associates. With so much experience of designing in North America and Europe the new company started with many advantages. Mr Loewy himself spends several months each year in France and CEI's keymen are American, led by Harold Barnett who joined RLA, New York, in 1940, and has been largely responsible for inspiring the French activity.

CEI operates a 40-man office in the three main spheres of design: interiors, packaging and products. Interiors are provided for retail stores, offices and showrooms by a predominantly French staff of four designers and six draughtsmen and renderers. Packaging, currently one of the biggest activities

in CEI, has a French, Swiss, Dutch and Greek staff of six designers and four assistants. Products are managed by three American and French designers assisted by five draughtsmen and modelmakers. There is a branch office in Brussels to handle Benelux clients; outside France CEI designs for firms in Germany, Switzerland and the UK.

The American concept of a total design service is new to Europe. CEI can provide and supervise a complete programme of planning which includes market forecasting, product design and presentation. Currently much of the work involves interiors and these with their crisp, spare lines reflect, not surprisingly, the contemporary all-American touch. CEI packaging, too, has an uninhibited trans-Atlantic flavour, while its products are refreshingly free from clichés.

Harold Barnett, left, and Raymond Loewy with the *Alouette* helicopter designed for Sud Aviation, France.



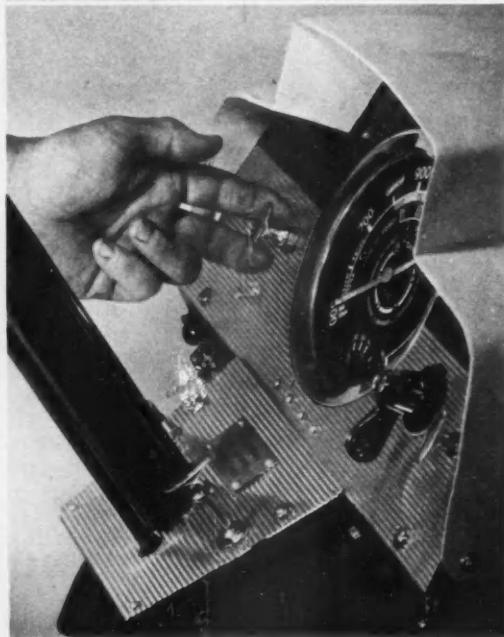
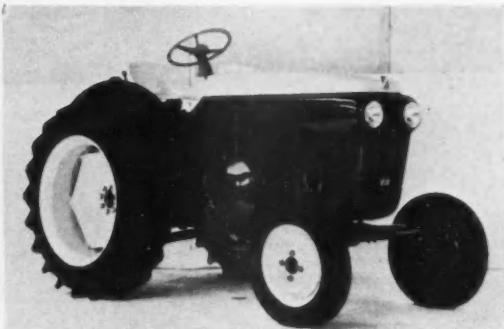
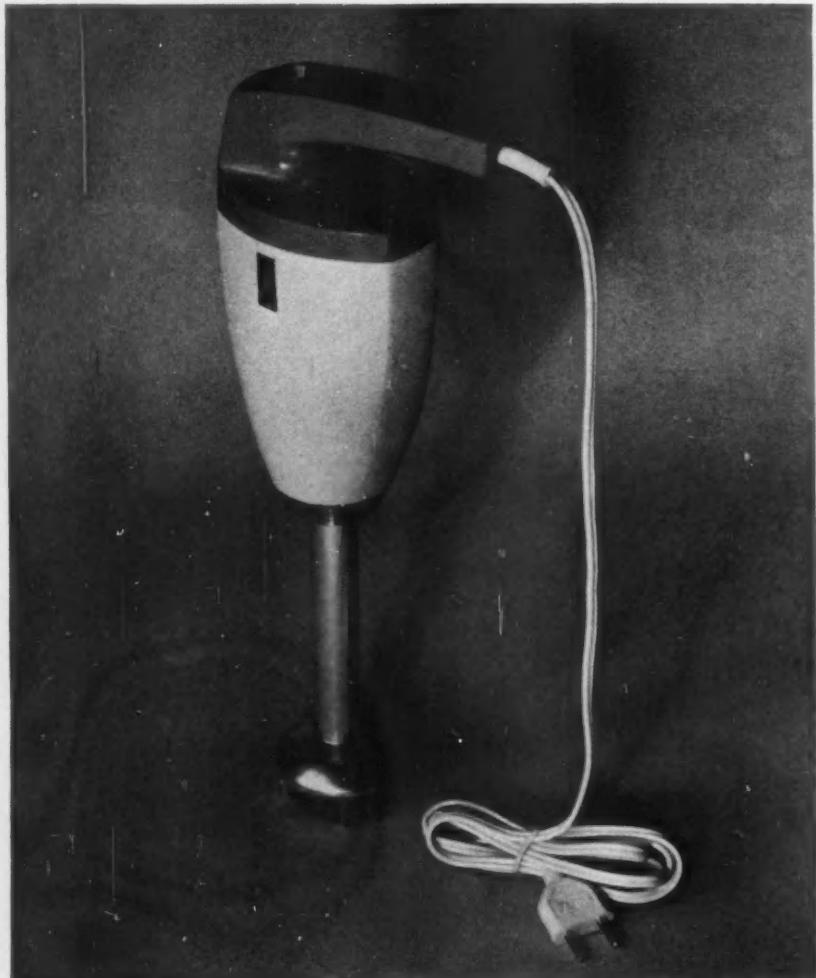
Champs Elysées offices for Air France.



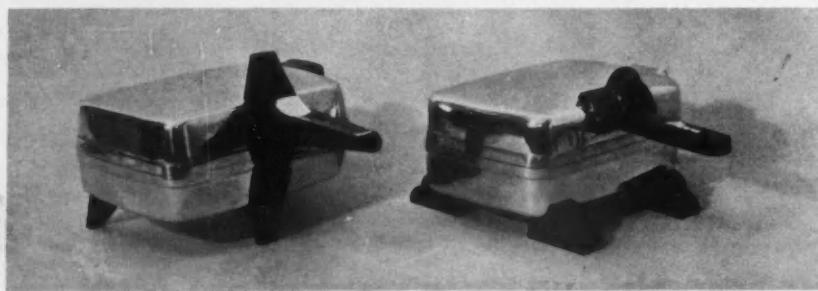


The director's office at C.E.I.

Novamix hand mixer for Nova, Belgium, one of the winners of the 1959 *Sigles d'Or*, Belgian design awards.



ABOVE Tractor and driver's control panel for Vierzon, France.

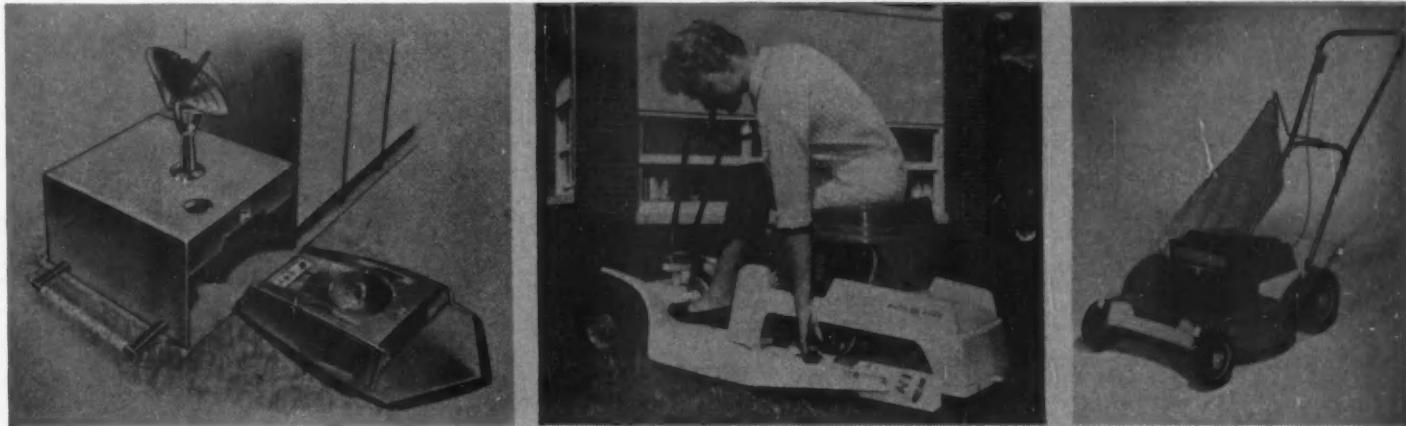


Previous model and, far left, redesigned waffle iron for Nova, Belgium.



DIRECTIONS

A miscellany of new products and ideas from abroad



USA: lawn mowers

The manufacture of powered equipment for the garden has become big business in the USA and is rapidly expanding, just as it is in Britain. It is estimated that Americans buy 3 million motor lawn mowers every year. Unlike Britain, however, competition for this vast market has given rise to a serious concern for the appearance of the machines with the result that industrial designers are regularly employed by the industry.

The products of two companies are illustrated here. The Toro Whirlwind, FAR RIGHT, is the smaller of a wide range of grass cutting equipment for which Charles Butler Associates were the consultant designers. Both hand-propelled and self-propelled versions are available in 19-inch and 21-inch sizes. The Whirlwind works on the rotary blade principle, the cut grass being sucked up into a bag attached to the side. To avoid burns and other accidents the engine is enclosed in a high density polythene shroud.

The Roto-Ride mower by Moto-Mower Inc, RIGHT, illustrates

the growing trend for the larger riding models. It has a 24-inch cut with revolving drum blades and incorporates a 14-inch roller powered by a 4.25 h.p. engine. One notable feature is the wheel adjustment of the cutting height allowing the operator to dial the height of the blades above the ground.

A forecast of what the lawn mower of the future may be like is suggested in the sketch, LEFT, of a fully automatic machine which Moto-Mower Inc maintains will be a practical proposition by 1969. The machine would incorporate an electronic eye which would automatically signal when the grass had grown to a preset height. Operated by a battery designed to be recharged by solar energy the machine would leave its shelter and follow a course that had been pre-recorded on magnetic tape. When work is completed the machine would return to the shelter and turn itself off. But before harassed British gardeners get too enthusiastic they might well ask what happens in wet summers when there is not enough sun to charge the batteries.

USA: electric typewriter

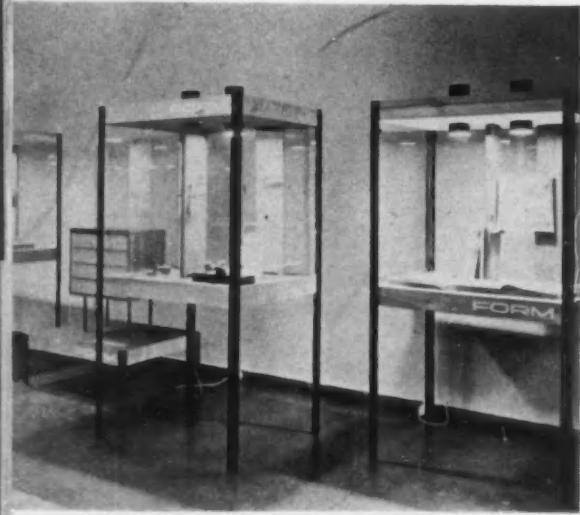
This new electric typewriter is claimed to have 78 new technical features compared with the earlier machine by the same company, in addition to the radical change in the overall appearance. One of the most interesting developments from the operator's point of view is the use of square key buttons and the shorter finger reach between keys. The touch on key buttons can be adjusted so that a uniform pressure can be obtained over the entire keyboard which slopes at 11° and is covered in to prevent dust collecting in the mechanism. Other technical features include a 13-inch or 17-inch carriage with, it is claimed, the largest feed roll of any electric machine; a cushioned carriage return and regulated tabulation speed which reduces noise and wear; and a ribbon which can be rewound in 23 seconds and is fed through on character spacing instead of on the space-bar, thus ensuring the most economical use of the ribbon. The machine, which is being manufactured in Great Britain, is available in a variety of colours including blue, green and grey. CONSULTANT DESIGNER Sundberg-Ferar Inc. MAKER International Business Machines.





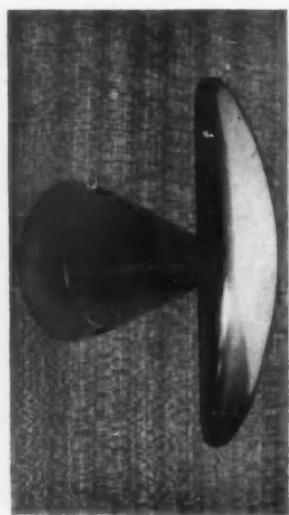
Australia: easy chair

New refinements in form and detailing are evident in the latest designs from this Australian chair manufacturer whose products are distributed on a nation-wide scale as well as in New Zealand. The chair shown here is one of the more expensive from a wide range of models. In the shaping of the hand rubbed mahogany framing there is a marked Danish influence. As in other models from this firm, the strength of the chair depends on an internal steel frame on which the seat and back are supported, leaving the minimum of strain on the wooden joints. The chair is upholstered with foam rubber over a patented spring suspension system and covers are removable for cleaning. DESIGNER F. Lowen. MAKER The Fler Co and Staff Pty Ltd.



Austria: selective exhibition

A recent re-affirmation of the growing awareness of modern design in Austria was the *Form* display at the *Vienna Fair* last autumn. The display, organised by the Austrian Institut Für Formgebung, confirmed impressions gained earlier at the *Brussels International Exhibition* that new work of considerable interest is being pro-



duced by Austrian designers and manufacturers. The simplicity of the showcases, designed by W. Schröfl, was particularly effective in its combination of natural wood and black angle iron. Champagne goblet. DESIGNER Professor O. Haerdtl. MAKER Salzburger Cristallglass GMBH. Handle for lift doors in satin finished aluminium. DESIGNER C. Auböck. MAKER Ing Stefan Sowitsch & Co.

Denmark: motel

La Tour (the tower) motel at Aarhus is a recent example of how the big oil companies are assuming a new role on the Continent - that of hotel ownership. The dearth of new hotel building is common throughout Europe, due to the high cost of building and the difficulty of obtaining an adequate return on capital invested. The oil companies, which can regard hotel ownership as a sideline and an adjunct to their more serious business of selling petrol,

are better able to overcome this problem than the normal investor and in many cases have proved themselves to be enlightened patrons of design. La Tour was built by the Esso Petroleum Co Ltd, and illustrates this patronage at its best. The motel has 21 double rooms each with a private bath, as well as a restaurant, BELOW, and cafeteria. Most of the furniture for the dining room was chosen from standard designs by Professor Arne Jacobsen for Fritz Hansen Eftfi. The architects were J. K. and Kaj Schmidt.

**Switzerland: office chair**

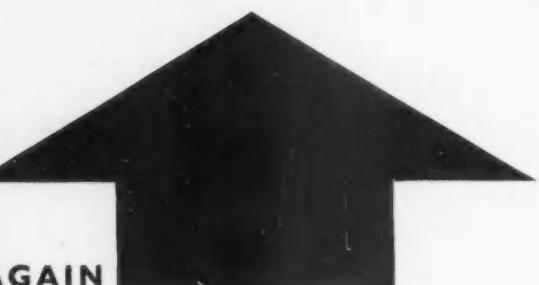
This office chair makes use of elegantly tapered drawn steel legs to provide a sturdy but light supporting structure. Plastics gliders (as shown here) or castors can be fitted. The chair has a patented spring loaded swivel mechanism and the seat and back are upholstered with foam rubber over formed plywood. The chair is distributed in Germany as well as Switzerland. DESIGNER Robert Gutmann. MAKER A. Stoll.



12,742

Design

GOES UP AGAIN



ABC certified net sales, January-June 1959, are 12,742 – the highest to date. With a readership of 10 to a copy (disclosed in a recent professional survey) DESIGN reaches more than 120,000 each month.

DESIGN is Britain's leading magazine on industrial design. Its high prestige amongst progressive business and professional people is matched by real sales power. **DESIGN** covers a wide range of trades and is a valuable complementary medium to the trade journal.

An analysis of twelve months' advertising (to June 1959) gives the following results

Office, contract and display furnishing and equipment (including lighting fittings 11%)	47%
Materials and methods	30%
Designers' equipment and supplies, and graphic design	12%
General and prestige	11%
	100%

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Miscellany

High lights

These two fittings, 2 and 3, allow patches of light to be provided exactly where they are needed without undue restriction on the location of the units. The lamps used have the same compact 12 volt/50 watt filament which gives precise light control. In one of the lamps, 3, the filament is housed in a mushroom shaped bulb only $2\frac{1}{2}$ inches in diameter, giving a patch of light subtending about 20 degrees; the unit is small enough to allow the bulb to be sealed and screened from direct view.

In the other unit, 2, a crown-silvered spherical bulb is used, eliminating direct emission of stray light. Virtually all the light is directed in a beam subtending only 8 degrees. This spotlight bulb (British development) is sufficiently powerful to be used for highlighting in an area of general lighting. (It will provide some 50 ft-candles at a distance of 20 ft.) As there is no stray light, there is no distraction; the effect of a patch of bright light without an apparent source in an interior can therefore be extremely dramatic.

Designed by Richard Stevens for Atlas Lighting Ltd, these fittings were intended originally for display lighting, but in fact they have far wider applications. For example Atlas Lighting will have them in the lighting of the plant rooms at its new offices in St Martin's Lane where they will be used with dramatic effect to light



A nice cup of tea

The *Lesstea* pot, 1, is a new device for infusing tea. The maker, Modern Home Products Ltd, claims that the pot makes a drink with one-third less tea than usual, prevents the leaves from entering the cup, and reduces cleaning to a simple one-handed operation.

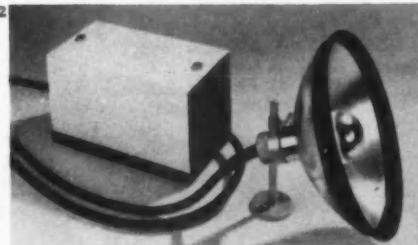
The infuser consists of a *Rigidex* polyethylene cylinder with a close fitting perforated plunger. The cylinder, which fits inside the teapot, is perforated at the base and has slots in it to allow water through. The tea is put into the cylinder, the plunger pressed down and teapot is filled with boiling water through the top of the infuser. The plunger is then raised slightly by drawing the stem upwards through a hole in the lid of the teapot. After the tea has brewed the plunger is agitated slowly a few times to bring out the full strength and flavour of the tea - which is then ready to pour. After use the infuser is removed, the tea leaves tapped out, and the infuser rinsed ready for the next pot.

F. WRAGG

the many valves and gauges individually from concealed sources.

A transformer is normally supplied with every lamp, but it has been kept simple and neat so that if it is visible, it will be unobtrusive.

HOWARD UPJOHN

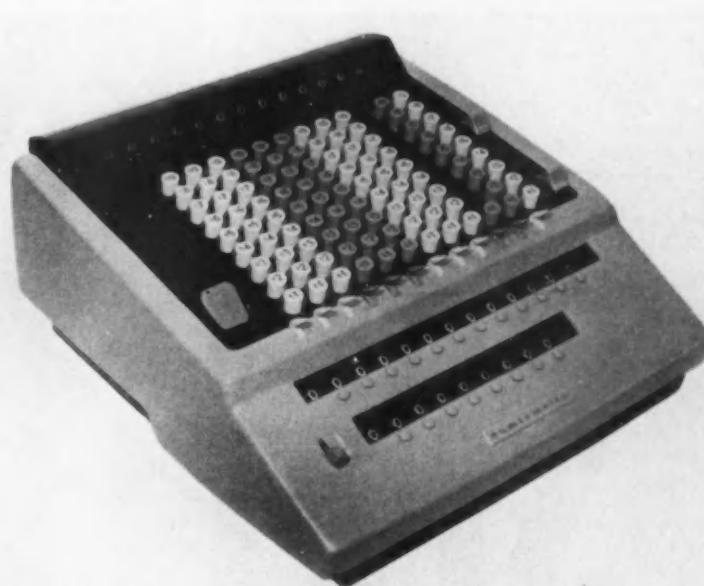


Adding it up

Many of the large companies manufacturing business machines in this country merely adapt the designs of foreign parent companies to the needs of British commerce. The design of many of these machines is excellent, but they are nevertheless identifiable as the work of American or Italian studios. A British company, Sumlock Ltd, through its parent company, Bell Punch Company Ltd, began to develop an adding machine about 20 years ago, and within this comparatively short life span, the firm has not only caught up with the ranges offered by its international competitors, but has recently produced the *Sumlomatic*, 4, a machine which embodies new ideas both mechanically and visually.

To appreciate something of the method of operation it is necessary to go back to 1642 when Pascal first developed the system of mechanical addition which is referred to today as the 'key drive'. This principle was simply the conversion of a linear movement into a visual signal based on the addition of digits. Towards the end of the nineteenth century in America an alternative method of operation was developed and this came to be known as the rotary system. The rotary machine, following a series of pre-set operations, carries out the required computation mechanically.

By the development of automatic features, the *Sumlomatic* has now become an intermediary between these two systems; its ease of operation, together with some idea of its versatility was demonstrated recently. The appearance of the machine is the result of co-operation between the development staff of Bell Punch



Company, and John Barnes of Allen-Bowden Ltd. The two-tone green finish continues the traditional colour scheme adopted by the firm, but in common with many manufacturers who have been through the crinkle and hammer finish phases, the surface texture is now semi-matt.

It is significant that a company with such a comparatively short history in this field of engineering should have sought the services of an industrial designer, and the result of this alliance is a most pleasing machine which is free from fashionable eccentricities and clichés.

HOWARD UPJOHN

**BALDING
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Gordon Mansel

Reports

PROFESSIONAL PRACTICE:

a student designer's guide

The Society of Industrial Artists has recently published Part 1 of its Syllabus for the Study of Professional Practice in Commercial and Industrial Design. The syllabus was drawn up by the education committee of the SIA, under the chairmanship of Milner Gray, in collaboration with Norbert Dutton, who prepared the text. It is intended for the guidance of schools, etc., in the planning of lectures on professional practice for designers. Extracts from the pamphlet, which is available from the SIA, 7 Woburn Square, London, WC1 (price 1s) are given here; Part 2, in course of preparation, will be issued later.

Designer/client relationship

"... Designing for industry and commerce differs from painting and sculpture in that the work is normally carried out for a purpose specified by a client. The designer must, therefore, satisfy his client in addition to meeting whatever technical restrictions may be imposed; the ability to do so consistently is the foundation of a successful practice."

"... The requirements of any design commission are usually defined at the outset, when the designer is briefed. A clear and adequate brief is essential and in his own interest the designer should ensure that no misunderstanding exists as to what has to be done. The engagement of a designer to carry out certain work for a specified fee constitutes a contract between the designer and his client, to whom both are committed and the terms of which should therefore be clearly recorded."

The sequence of a typical assignment

"... While design commissions vary considerably in both scope and complexity, the following procedure occurs in almost all cases and may be regarded as the normal sequence of events:

(a) At the first meeting, the client outlines his requirements. A full discussion should ensure that these are thoroughly understood and agreed on both sides. Alterations and revisions during the course of a job, involving loss of time and money, can usually be avoided by an adequate briefing at the outset.

(b) The designer calculates how long (in hours) the work is likely to take, and states his fee. He also undertakes to complete the work or carry out the first stage by a given date. If the client agrees to the terms, the designer is instructed to proceed with the work. This instruction, which may be given verbally, should be confirmed in writing.

Conditions of practice

(c) Any conditions which the designer may wish to impose must be stated at this stage. He is entitled to propose whatever conditions he likes, and his client is, of course, equally free to accept or reject them. While the SIA has laid down conditions of normal practice for design in various fields, a client cannot be held to these unless he has been told of them and has agreed to them. Disputes arising from such questions as the designer's right to sign his work, or the client's right to alter it without his consent, should always be settled in advance; otherwise, in the event of any subsequent disagreement, the designer will have no redress.

(d) Within the agreed period, design proposals are sub-

mitted to the client in the form of a rough sketch, dummy or model. In exceptional cases, a written report may precede the preparation of designs.

(e) In designing for certain industries, immediate approval of first stage recommendations is unusual. The client will probably wish to consult his sales and technical staff. In the course of such discussions, at which the designer should always be present, modifications to the original design may be suggested.

Most industrial products are evolved by consultation between various departments, and where suggestions for a saving in production costs or improvement of the product are put forward, the designer should accept them, provided they do not materially affect his conception of the design. If a revision proposed for a valid reason seems likely to impair the design, the designer can usually meet the suggestion with some alternative modification which is aesthetically satisfactory. It is important for him to know, therefore, not merely what changes are suggested but also why they are suggested; hence the importance of his being present when they are discussed.

Rewards and modifications

(f) Such modifications as have been agreed are now incorporated into revised design proposals which are resubmitted for approval or further discussion. (Since the extent of revisions during the development stage can rarely be foreseen, it is customary to charge for them according to the time entailed. A fixed fee should not be negotiated in advance when the probable extent of the work cannot be accurately assessed.)

(g) On receiving the client's final approval, design proposals are returned to the designer for the preparation of 'finished art' or of working drawings, together with any requisite production specifications. On completion, these are delivered to the client and approved by him (after amendment, should any be required). The designer's responsibility may end at this point, when it is customary to render his account. On the other hand, he may be involved in further development work after production samples have been made, or be required to advise on production problems which may arise in connection with the carrying out of his designs. In such cases, he may negotiate with his client for interim payments at specified stages of the work. See (f) above."

How fees are calculated

"... Before placing a commission, the client will as a rule wish to have some idea of the fee involved. Since designers differ in ability and experience, and commissions vary widely in complexity, there can be no standard scale of charges. Moreover, the fee for a particular design may vary according to the uses that are to be made of it; for example, a poster for national coverage will obviously cost the client more than one merely for local display.

The SIA publishes schedules of average fees in certain branches of design as a general guide for qualified practitioners, but every designer will need his own method of estimating. The usual procedure is as follows:

(a) The designer estimates the annual net revenue, or profit, that he expects from his practice. This figure will vary according to his experience and ability.

(b) He then assesses his total annual expenses, or business overheads.

(c) These two amounts (expenses plus profit), added together represent his required annual turnover, i.e. the total revenue received in fees during a given year. A simple calculation will then give the hourly rate that he should charge for services.

(d) This rate, however, takes no account of unproductive time. No designer spends the whole of his time on work for which he can charge a fee. Time must

be allowed for correspondence, keeping accounts, visiting clients, etc., and allowance made for periods of unemployment between jobs.

(e) The hourly rate must therefore be adjusted to cover an estimated period of unproductive time, and this figure be adopted as the standard unit in costing.

(f) When estimating his fee for a proposed commission, the designer must assess as accurately as possible the time it is likely to take, multiply this by his hourly rate, and so arrive at the minimum fee at which the assignment can be profitably undertaken.

Design fees should be clearly distinguished from any expenses incurred on the client's behalf, such as for photoprints, typesetting, travelling expenses, etc., which should be shown separately on the designer's invoice. It is obvious that an estimated fee can take account only of the amount of work which can be foreseen when the job is undertaken: for example, the preparation of a rough sketch and a finished drawing. If the client should subsequently ask for extensive revisions or alternatives, such additional work is chargeable according to the time it takes (unless, of course, it arises from any failure of the designer to carry out his original instructions). It is prudent to include a clause to this effect when estimating."

Methods of payment

"... Payment for design services may be made in several ways: by fees for a single or multiple assignment, by a retaining fee, or by royalties. These different methods are described below, and may be modified or sometimes combined.

Fees for a single or multiple assignment

In the simplest case, a single fee may be agreed to cover both rough sketch and finished drawing; in exceptional circumstances a preliminary design may be dispensed with or may exist already. Normally, however, the designer is engaged to prepare both the rough designs and finished drawings, and here it is customary to estimate a separate fee for each stage. It occasionally happens that a project is abandoned without finished drawings having been prepared, in which case if separate fees have been negotiated, no disagreement can arise as to what proportion of the total fee is due to the designer. Moreover, the work entailed in drawing up design proposals can as a rule be forecast with reasonable accuracy. In certain branches of design, however, the form which finished drawings may take cannot be determined until preliminary designs have been prepared and discussed, and therefore they cannot be costed in advance. In such cases they are customarily charged at an agreed hourly rate according to the time entailed.

Retaining fees

A retaining fee is paid for specified services rendered during a given period and is agreed in advance. In addition to advice the retaining fee may cover the preparation of designs, for example, for a continuous series of projects, or where technical developments involve unforeseen delays or revisions. Before estimating fees on a period basis it is necessary that the amount of work to be carried out should be forecast with reasonable accuracy. If this is impracticable, the retaining fee may relate only to such continuous and minimum services as can be defined in advance and separate arrangements will have to be made to cover payment for any additional work.

Royalties

For the design of certain mass produced articles payment may be made wholly or partly in the form of royalties: the designer receives a fixed percentage of the retail price of each article, or a fixed sum per article sold, so that his remuneration is proportionate to the success of the product."



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NEWS

PEOPLE

Royal designers

The council of the Royal Society of Arts recently made the following new appointments to the distinction of Royal Designer for Industry: Robin Day, for furniture and exhibition design; Abram Games, for posters; F. H. K. Henrion, for packaging and graphic design; Hans Schleger, for exhibition display and packaging, and Berthold Wolpe, for type designing and lettering; Hans J. Wegner, the Danish designer, has been appointed an honorary RDI for furniture design.

Robin Day, 44, is one of the few British furniture designers with an international reputation; he is probably best known for his work for S. Hille & Co Ltd, and



Robin Day



Abram Games



F. H. K. Henrion

for the seating at the Royal Festival Hall. He had an award in the International Low Cost Furniture Competition organised by the Museum of Modern Art in 1948 and was given the Design Medal for 1957 by the Society of Industrial Artists; his television set for Pye Ltd was one of the CoID Designs of the Year for 1957. His work for exhibition design includes the successful British Design exhibition held in Frankfurt last year (DESIGN September 1958 page 59), the British Government stand at the British Trade Fair in Helsinki in 1957, and a stand for E. K. Cole Ltd at this year's International Plastics Exhibition.

Abram Games, 44, is one of Britain's most eminent

poster designers. He has had awards in a number of international competitions and has exhibited in most European countries, in the United States, in Israel and Brazil. He received an OBE for his services to poster design in 1957. His views on the future of British design in this field were given in the first of the *Graphic Design* series (DESIGN March pages 23-7).

F. H. K. Henrion, 45, is vice-president of the Society of Industrial Artists and chairman of its joint consultant designers' group. He has designed for the



Hans Schleger



Berthold Wolpe

GPO, and the London Transport Executive, and is now a consultant designer to the British Transport Commission. His work has been exhibited in this country (he is to have a show at the Institute of Contemporary Arts next spring), in Europe and America. He was awarded the MBE in 1951 for his work at the South Bank exhibition for the *Festival of Britain*.

Hans Schleger's work in graphic design and packaging is well known in this country and abroad. His recent work includes (for Mather and Crowther Ltd) the Mac Fisheries Ltd house-style (DESIGN November 1956 pages 34-5), designs for Shell-Mex and BP Ltd, and Fisons Ltd; he has also done work for London Transport, the British Transport Commission, Finmar Ltd, and other leading firms.

Berthold Wolpe, 44, designed the *Albertus* type face for Monotype, which has received international recognition. He is now on the staff of Faber & Faber.

Hans J. Wegner, who has been appointed an honorary RDI, is a Danish furniture designer. The prestige that Danish furniture enjoys today is to a considerable extent due to his influence.

Birthday honours

The following were included in the Birthday Honours: GBE: Sir William Palmer, chairman, European Free Trade Committee, and chairman, British Man-Made Fibres Federation, for services to industry and commerce.

Knight Bachelor: Leslie Gamage, chairman and managing director, The General Electric Co Ltd.

CB: Eric Bedford, chief architect, Ministry of Works. CBE: T. A. O'Brien, PRO, General Post Office; W. E. Thirkettle, principal, London School of Printing and Graphic Arts; Mary Woodall, director, Birmingham City Museum and Art Gallery. OBE: Eric Lyons, architect.

Bicentenary medal

The Royal Society of Arts' Bicentenary Medal for 1959 has been awarded to Frank A. Mercer. Until his retirement a few months ago he was managing director



Frank Mercer

and editor of The Studio Ltd. He edited many of the studio's publications, including *Art in Industry* (now *Design for Industry*).

Mr Mercer has been a fellow of the Royal Society of Arts since 1933, a member of its council since 1947, and treasurer since 1957.

The Bicentenary Medal was instituted in 1954, and is awarded annually "to the person who in a manner other than as an industrial designer has exerted an exceptional influence in promoting art and design in British industry".

Scottish member CoID

The President of the Board of Trade has appointed Elson Gamble to the CoID Scottish committee. Mr Gamble, who is a director of the House of Fraser Ltd, is a member of the council of the Scottish Retail Drapers' Association, and a Master of the Court of Bonnet Makers and Dyers.

Editorial assistant

Malcolm J. Brookes has recently joined DESIGN as an editorial assistant. He was previously a technical editorial assistant on *The Electrical Times* and has also spent some years as an electronic engineer with EMI Electronics Ltd.

New appointment

Oliver Hill, formerly chief appearance designer at the GEC Appliance Design Centre (DESIGN March page 45) has now joined AEI-Hotpoint as appearance design manager. He will be responsible for the design of the domestic equipment and appliances marketed by Hotpoint.

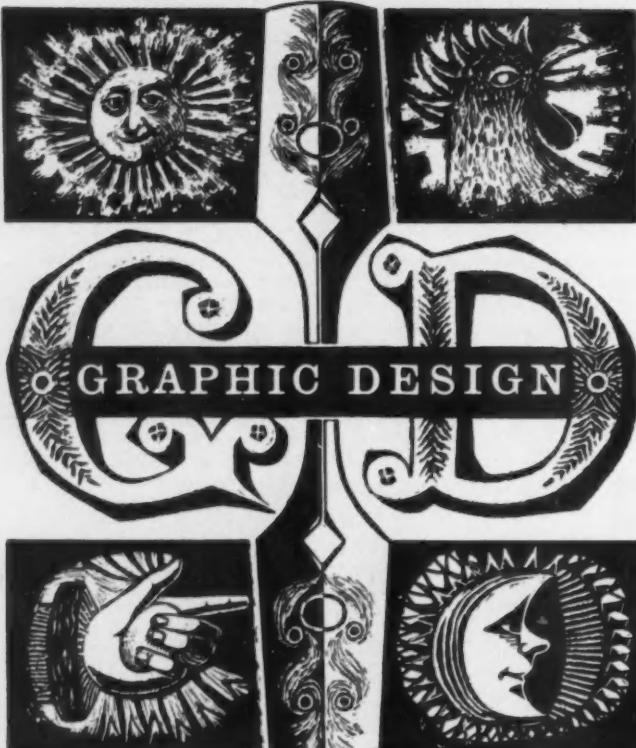
REPORTS & CONFERENCES

New chair in industrial design

The establishment of a new chair in industrial design (engineering) at the Royal College of Art (DESIGN July page 63) is symptomatic of the growing demand for trained designers, and of the new anxiety in Britain as to whether our training facilities are adequate to meet this need.

The whole subject is being debated by the newly continued on page 65

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... if you are a manufacturer

The Industrial Division will consider your products for inclusion in Design Index—a step towards inclusion in The Design Centre.

... if you are a journalist

The Council's Press Office will help you to find out anything you want to know about design in Britain and will also keep you in touch with the work of the Council.

... if you are a qualified designer

The Record of Designers is a useful place to have your name recorded (free of charge).

... if you are a teacher

The Education Section supplies information and materials to schools, education authorities and other bodies interested in design. It offers advice on careers and training in industrial design, and arranges group visits to The Design Centre for schools and other organisations.

... if you want a designer

The Record of Designers is the best place to find a designer who has had the type of experience you want.

... if you want a lecturer

The Lecture Panel recommends speakers and offers advice on visual aids and the planning of courses.

WHATEVER YOUR JOB, if you are interested in good design you will want to know about the Council's reference library of books and periodicals and its lending libraries of photographs and slides, for which small fees are payable. News and reviews of current design activities in Britain appear in the CoID's free monthly circulars, Design Newsletter and Design Calendar.

formed National Advisory Council on Art Education (DESIGN April page 63), whose report is anxiously awaited by all concerned with the training of designers: the National Council could well transform the whole basis of art training in Great Britain.

All European countries are re-assessing their opportunities for, and method of, training industrial designers. On the international level this problem will be one of the principal subjects for discussion at the first General Assembly of the International Council of Societies of Industrial Designers (ICSID) which is being held in Stockholm this year (see below).

It will be interesting to see what Misha Black achieves as professor of industrial design (engineering) at the RCA, and whether he will continue with or propose major amendments to the present curriculum in that department of the college.

Mr Black is well equipped for the new post; he is the CoID representative on the National Advisory Council on Art Education, and is vice-president of ICSID. The fact that he will, as do other professors at the RCA, continue in private practice ensures his avoidance of an unrealistic academicism.

Designer's summit

ICSID, the International Council of Societies of Industrial Designers, under the chairmanship of Peter Müller-Munk, held its first general assembly in Stockholm recently. During the assembly, which was organised by the Society of Swedish Industrial Designers, there was a special exhibition of industrial design in Stockholm, and the *Konstfackskolan*, a newly built college of art and design was opened. Paul Reilly, deputy director, CoID, gave a talk on *An International Definition of Industrial Design*, and Enrico Peressutti, of the Associazione per il Disegno Industriale, Italy, will discuss the training of industrial designers.

Design protection

As anticipated when Alan Green's private member's bill was withdrawn last year, a Board of Trade committee has been set up to review the law on protection of industrial designs. (The existing law on the protection of industrial designs is the Registered Designs Act, 1949, as amended by the Copyright Act, 1956.)

The chairman, Kenneth Johnston, will be assisted by the Comptroller of the Patent Office and six other members drawn from the various professional and business circles chiefly affected.

The committee's terms of reference are: "To consider and report whether any, and if so what, changes are desirable in the law relating to the protection of industrial designs. In framing their recommendations the committee should include consideration of the desirability of enabling United Kingdom designs to receive cheap and effective protection in other countries on the basis of reciprocity."

Manufacturers and designers who wish to submit suggestions or give evidence should write to The Joint Secretaries, The Designs Committee, Patent Office, 25 Southampton Building, WC2.

Introducing ergonomics to industry

One of the most difficult tasks of the ergonomist is in introducing ergonomic principles to industry. D. E. Broadbent, director of the Medical Research Council, Applied Psychology Research Unit, stressed this at the Ergonomics in Industry conference, held at the Brunel



The house at Hatfield

The kitchen/dining room of a showhouse on the new Oxleaze Estate at Hatfield, which was open to the public recently. The house is one of four basic types designed by Basil Spence and Partners, and built for the Hatfield Development Corporation

by Leslie & Co. The furnishing schemes and interior decoration are by Jo Partrick; all the furniture and furnishings were chosen from the CoID's 'Design Index', and lent by manufacturers and retailers.

College of Technology recently. The aim of the conference, organised by Robert Borger, was to "enable works managers to form a better idea of what ergonomics—if put to use by their own specialists—has to offer them". Certainly each of the 35 executives and engineers who attended should have benefitted from the advice and experience of the speakers. These included Dr W. F. Floyd and Brian Shackel, as well as members of the college staff.

In the case of machine or equipment design each speaker stressed the need for the ergonomist to be consulted at the beginning of a project rather than at some intermediate stage. In this way the increased cost to the manufacturer or consumer would be negligible, yet increased performance and productivity would result; some work study problems could be solved more easily by introducing ergonomics.

Research trends were towards introducing fundamental studies as well as directly applied ones. By this means it was hoped to reduce, to some extent, the need for empirical studies of each specific industrial problem. Mr Broadbent's view was that provision of detailed courses for senior staff of firms would be of use in promoting ergonomics to industry, and a scheme for seconding industrial staff to research teams working on specific industrial problems would also be of mutual benefit to both industry and research.

M.J.B.

Lace and nets

A conference on the design of furnishing lace and nets was arranged by the CoID Scottish Committee

recently with the support of the Scottish Lace Furnishing Manufacturers Association. The delegates who attended heard papers read by Donald Tomlinson, the director of the Cotton Board Colour, Design and Style Centre, Manchester, Mrs Moira Halifax of Peter Jones, London, and Neil McCallum, managing director of McCallum Advertising Ltd, Edinburgh. The speakers presented their views and experiences on the way sales can be stimulated by adopting a progressive attitude towards design. R. R. Scott Hay was in the chair.

As a supporting feature, there was a small exhibition staged in two parts. In one part there was a selection of laces and nets from 'Design Index', and in the other selections sent in by firms represented at the conference were shown; the basis of selection being either that they were best-sellers or designs considered by the manufacturers themselves to be their best.

GEORGE OLIVER

American visits

The first of the groups to visit North American retail stores under the 'Kasper' scheme has recently returned to this country.

This scheme to enable young executives in British firms to gain a first hand knowledge of North American market requirements and sales methods originated at the Dollar Exports Council's conference at Eastbourne in December 1958, when Joseph P. Kasper, president, Associated Merchandising Corporation, New York, offered facilities for designers, technicians, advertising

continued on page 67



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NEWS

and sales representatives from the consumer goods industries to work for a period in retail stores belonging to his company in the United States and Canada.

There were 10 young men in the pilot group, which consisted of representatives from the textile industry, a leather handbag manufacturer, two women's knitwear firms, etc.

The success of this first visit has no doubt stimulated greater interest — for the second group, which will be in the States and Canada during September, October and November, is larger, and a wider field of industries — including pottery, and furniture firms — will be represented.

So far, however, only one designer has visited North America under this scheme, although they were foremost in Mr Kasper's mind when he originated the idea. "Once behind the counters", he said in his speech at Eastbourne, "and in direct daily and hourly contact with American men and women shoppers, you designers and others would learn swiftly what is wrong with the present designing of British wares and of British packaging destined for export to America."

(Firms interested in this scheme should write to the Dollar Exports Council, 21 Tothill Street, SW1.)

EXHIBITIONS

Twelfth Triennale

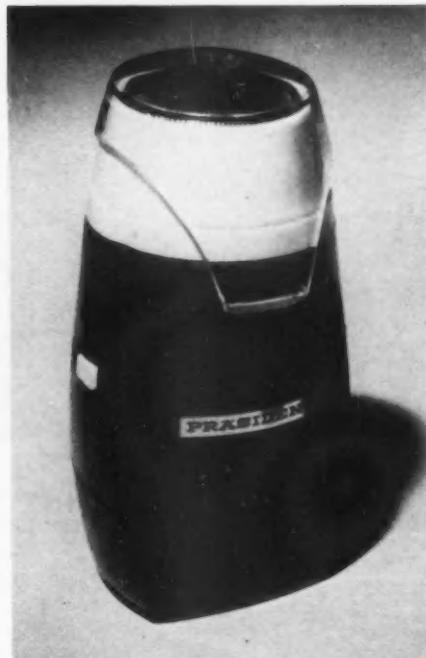
The twelfth *Triennale*, to be held in Milan from July 16–November 4, 1960, differs from its predecessors in that it will attempt to concentrate on one central theme — the home and the school. In the Italian section the home and school will be considered in their relationships with architecture, town planning, interior decoration and equipment. There will also be an international exhibit of glass and steel production, which, the organisers claim, "is to serve as a comparison and a yardstick of current world production with a view to fostering further improvement". The organisers hope that exhibitors in the foreign sections will concentrate on the home and school theme.

Plastics prizes

An electric shaver, designed by P. Sieber of Western Germany, shown ABOVE RIGHT, was awarded first prize in the special *International Design Display* at the *Plastics Exhibition* this year. A pair of magnifying glasses designed by Professor Hoffman-Lederer of Western Germany, a set of household containers designed by Carl Arne Breger of Sweden, and melamine dinnerware by Raymond Loewy Associates were also commended. The judging panel consisted of Robin Day, Count Sigvard Bernadotte of Denmark, and Ernesto Rogers of Italy.

The announcement of the prizes was made by Paul Reilly, deputy director CoID, who introduced the three judges to a large audience at the *Plastics Convention*, held during the exhibition. Each of the judges was asked to speak in turn of design trends within their respective countries. Count Bernadotte described industrial design as a process of simplification, in which appearance came last yet was an inseparable part of the whole. In addition to his other qualifications the designer must be a salesman and a diplomat — two qualities which can be learned only through experience.

Ernesto Rogers spoke of the all embracing nature of the designer's outlook, so that a person who judges a building should adopt the same principles when look-



Award winner

This electric shaver, designed by P. Sieber, was awarded first prize in the International Design Display at the Plastics Exhibition (see Plastics prizes).

ing at a small object in plastics or a motor car. But he thought designers make a number of mistakes today: they react too violently against the past instead of building on tradition, and they regard beauty as an end in itself in an effort to make one product stand out against another. He thought it was necessary to return to basic principles although it was wrong to copy past styles.

Robin Day described the growing public awareness of good design, and with a number of illustrated examples discussed the way in which forms could express the material from which a product is made. The papers, which seemed to avoid the subject on which the judges were asked to speak, were followed by some searching questions from the floor.

J.E.B.

Swiss fortnight

A Swiss *Fornight* is to be held in London from October 5–17; as well as shop window displays, art exhibitions and cheese and wine sampling, there will be an exhibition *Design in Switzerland*, organised by the Swiss Werkbund, at the Ceylon Tea Centre, Lower Regent St, London W1.

COMPETITIONS

Transforming trade literature

Details have been announced of a competition for manufacturer's trade and technical literature, sponsored jointly by the Royal Institute of British Archi-

tects and the Building Centre. The competition is open to literature intended for the architect, and its aims are to persuade manufacturers to improve the quality and content of their literature, and to encourage them to conform to BS 1311. Last date for receipt of entries is December 31; further details are available from The Director, The Building Centre, 26 Store St, WC1.

The form for flatware

The Museum of Contemporary Crafts, New York, is organising an international design competition for sterling silver flatware. The aim of the competition is to discover what a cross-section of the world's leading designers and craftsmen consider the most suitable forms for knives, forks and spoons in sterling silver today. Industrial designers, artists etc, have been invited to submit drawings and 50 per cent of the submissions will be selected to be developed as prototypes. The Museum will eventually hold an exhibition of the winning designs. Further details from: Meyric R. Rogers, Director, International Design Competition for Sterling Silver Flatware, American Craftsmen's Council, 29 West 53rd Street, New York.

Jewellery in future

The Goldsmiths', Silversmiths' and Jewellers' Art Council of London has announced details of its 1959 *Competition and Exhibition of Craftsmanship*. This is open to designers working in precious metals and gem stones. Closing date for receipt of entries is November 2, 1959. Further details are available from the Honorary Secretary, Goldsmiths' Hall, Foster Lane, EC2.

MISCELLANEOUS

GPO for international standards

Ernest Marples, Postmaster General, recently announced that international standard sizes of paper are to be introduced into the Post Office. The change will begin with its headed notepaper — the Post Office uses about seven million sheets a year, and as they are redesigned, the sizes of many Post Office forms will also be adapted.

A new buff coloured envelope embossed with a 3d stamp is also to be made in an international size for sale at Post Offices. It will measure 6·4 inches × 4·5 inches — larger than the envelopes at present on sale.

A reduction in the variety of envelope sizes would help the Post Office in its change over to mechanised sorting. At present there are over 50 standard sizes of envelope listed by the British Standards Institution, as well as the many other sizes that are also in use. This is one of the greatest handicaps the Post Office is facing in its efforts to get the mail handled by machines (DESIGN March pages 41–4).

Coping with the cotton crisis

The Export Services Branch of the Board of Trade has published the comments of a well-known Western Australian buyer who wrote to the UK Trade Commissioner in Western Australia about the fall in sales of British cottons in that territory. In order to maintain sales, he writes, British manufacturers must "ensure that the quality of designs are of a high standard. We always sell design first, finish and manufacture to follow". On the question of presentation he writes "Here we (Britain) lag behind, particularly Japan, whose goods are usually beautifully cellophane wrapped

continued on page 69

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A COUNCIL OF INDUSTRIAL DESIGN
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DESIGN

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Design may be obtained from
the Business Manager, Design,
28 Haymarket, London SW1.
Orders should be placed not
later than the end of the
month of issue.

well ticketed with manufacturers' specifications . . . This makes for better presentation and display; Japanese manufacturers too, are prepared to produce and confine certain designs to one house".

Take over

The Art Metal Construction Co of New York has recently announced the acquisition of the Knoll companies - Knoll Associates Inc, Knoll International Ltd, and Knoll Textiles Inc. The Knoll companies will continue to operate as independent concerns. Florence Knoll, who with her husband, the late Hans Knoll, founded the Knoll enterprise in 1943, will remain president of the three Knoll companies, and has also been appointed director of design and research for Art Metal.

Examination for ergonomics

The Faculty Board of Engineering in Cambridge has this year established an examination in *Principles of Industrial Management*. The schedule of subjects for the examination includes a paper on *Human Behaviour in Industry*, and the paper will consist mainly of questions on: elements of social structure with particular reference to small groups; human problems in industry; motivation and morale; applied experimental psychology and its relation to the design of equipment, work methods, fatigue and training; the social problems of technological change.

Design office in Newcastle

Design Research Unit has recently opened a Newcastle office: Limbard House, 3 Higham Place, Newcastle-upon-Tyne. John D. Cochrane has been appointed designer in charge.



Display underlay

Spicers Ltd has recently announced an addition to its Carbon range. Carbon, introduced just over two years ago (DESIGN May 1957 page 37) provides a flexible and decorative form of packaging for bottles, glassware, etc. Carbon Display, the new material, ABOVE, can be used for display purposes. The manufacturer claims that the ridges will not flatten permanently under load, that the material can be bent and shaped without breaking.

The cultural card

"Very little critical attention has been paid to the postcard" said E. J. Carter of the Gordon Fraser Gallery when addressing the Design and Industry Association recently. He described the recent scheme started by his firm to produce cards carrying well photographed architecture, ancient and modern. Among the photographers Mr Carter will be using for the series are Eric de Maré, Edwin Smith, Raymond Moore, H. Lukyn-Williams and Peter de Souza. The backs of the cards have been redesigned by Sheila Stratton "to have typographical validity of their own".

LETTERS to the Editor

China challenge

SIR: The article *Paradox in China Sales to USA* (DESIGN May pages 27-30) was most stimulating. It is true to say that North American markets accept and take traditional designs from the industry.

However, we should not lose sight of the fact that the major percentage of pottery sold in that market is modern. It is possible to produce shapes and designs that are modern and British in style, appearance and warmth of colour that are acceptable to this market and sell very well indeed; this point my company has proved. The pottery industry should not only live on its fine tradition but create a new one, which it is very capable of doing.

TOM ARNOLD
Ridgway Potteries Ltd
Ash Hall
Stoke-on-Trent
Staffs

Engineering and ergonomics

SIR: I am particularly interested in ergonomics and have recently completed a course in industrial design and ergonomics at the Royal College of Technology, Salford.

We who are endeavouring to overcome prejudice and traditionalism in industry, need all the backing we can get, and I feel that the inclusion of a greater number of articles of an analytic nature on the plant and products of every branch of engineering would be invaluable to us, both in the direct sense, and by creating more interest in the minds of administrative staff and directors, who, at present, seem to dismiss your magazine as being of interest only to those engaged in the production of mass produced consumer goods.

I was able to introduce DESIGN for regular circulation in the research and development section of my firm solely on the issue which featured the inclinable presses (DESIGN November 1958 pages 24-8). I voice the opinion of a great number of people engaged on design work, who, like myself, find your articles and presentation stimulating because they present an all round picture of the knowledgeable application of good design.

A. C. SMITH
51 Etchells Rd
Cheadle
Cheshire

Trans-Atlantic tributes

SIR: As a subscriber to DESIGN, and as a teacher of industrial design here in the design section, Art Depart-

ment, State University of Iowa, I have been most pleased with your magazine, finding it filled with valuable information and with most important data for myself and for students with whom I have daily contact on design.

HOOD GARDNER
508 South Summit St
Iowa City
Iowa, USA

SIR: I must inform you how very pleased we were to be reported on in your article *Industrial Design Education in the United States* (DESIGN April pages 53-8). We feel that Eric Clements did an excellent job, and in fact his point of perspective has helped us understand one another a little more.

ARTHUR J. PULOS
Professor, Department of Industrial Design
College of Fine Arts
Syracuse University
New York

SIR: May I convey, through your good offices, my sincere congratulations to designer Harry Stevens on his poster for the National Society for Mentally Handicapped Children, which was reproduced in DESIGN (March page 25). I cannot recall when I have seen a more forcefully appealing piece of artwork.

JAMES S. MONTAGUE
Industrial Designer
Sears, Roebuck & Co
Chicago 7
Illinois, USA

BOOKS

The Penrose Annual, Volume 53

Edited by Allan Delafons, £2 2s

The 53rd Penrose Annual, despite a tricky four-colour cellophane cover, is remarkably dull, and as "a review of the Graphic Arts" it comes near to being depressing.

Following the established practice of recent years the annual is divided into two sections, the first devoted to print design and aesthetics and the second to the improving techniques of the printing industry. While the reporting of advances in machines and methods must, by its very content, be up-to-date, the first part of the new Penrose looks 10 years old.

Paul Beaujon's gossipy piece on the ubiquitous Eric Gill should find no place here and to juxtapose a similar commentary on Bruce Rogers seems not only to display an editorial bias but downright insensitive placing. Mrs Beatrice Warde suggests, after a visit to Australia, that a typographic renaissance is due in that country. From the illustrations she has brought back Australian typography is wallowing in its own particular brand of *chi-chi*. And again if the standard of graphic design in Belgium is only average must it take up valuable space?

In the second half of the annual Gordon McLeish adds little to our knowledge of colour photography. This is the sort of writing that can only bring suspicion on to other, undoubtedly interesting, articles in the annual.

If the annual intended to give an impression of gloom it has succeeded. It now seems to be the time for *continued on page 71*

Classified advertisements

Rates: 1s 3d per word (minimum, 20s). Box numbers, 1s extra

Copy: Last date for copy is 10th of month preceding date of issue

SITUATIONS VACANT

ASSISTANT EDITOR required for DESIGN. Some years experience in periodical journalism, interest in design, drive and ability to organise and work to schedule essential. Responsibility for writing major features and general progressing of magazine. Age 28-35. University or equivalent training. Salary £985-£1,105 according to qualifications, rising to £1,295. Good prospects. Pension Scheme. Write particulars of age, education and posts held with dates, to The Establishment Officer, (quoting D/55) The Council of Industrial Design, 28 Haymarket, SW1. TRAFalgar 8000.

LEADING INDUSTRIAL DESIGNER with established design organisation seeks working partner. Must be experienced and capable of sharing business management. No capital required but preference will be given to persons with established clientele or connections. Age 35-45. Please write in confidence to Box 386, DESIGN, 28 Haymarket, London SW1.

EXPERIENCED TEXTILE DESIGNER wanted for Frank Designs, 48 Neeld Crescent, Hendon, NW4, or 16 Oxford Street, Manchester.

AN OPPORTUNITY to join the Product Design Advisory Service of British Industrial Plastics Limited still exists. Applicants should appreciate the essential qualities of well designed plastic articles and possess a high degree of visual presentation. A chance to relax from plastic designing is possible if the applicant is able to undertake exhibition stand design. Full details of age, experience, etc, to British Industrial Plastics Ltd, Product Design Service, Tat Bank House, Oldbury, Birmingham.

FURNITURE DESIGNER REQUIRED. E. London district. Full details, experience, salary expected, etc, Box 382, DESIGN, 28 Haymarket, London SW1.

COVENTRY COLLEGE OF ART
Required September 1959 two part-time Teachers of GRAPHIC DESIGN to NDD level. Approximately 17 hours per week each. Salary at appropriate proportion of Burnham Technical Scale for Grade B Assistants. Appointment for 12 months. Application forms and further particulars from the Principal, College of Art, Cope Street, Coventry.

YOUNG FURNITURE and/or interior designer required for contract firm studio. Apply Catesbys Contracts & Export Ltd. Tel: MUSEUM 7777.

CAMBRIDGESHIRE EDUCATION COMMITTEE
CAMBRIDGESHIRE TECHNICAL COLLEGE AND SCHOOL OF ART
Principal: D. E. Mumford, MA
Part-time specialists are required in September to teach Technical Illustration to City and Guilds standard, and the following subjects to National Diploma in Design level: Book Layout; Typography; Lettering and Graphic Design. Apply in writing within 7 days of the appearance of this advertisement to the Principal, Cambridgeshire Technical College and School of Art, Collier Road, Cambridge, giving particulars of age, qualifications and experience.

EXCELLENT OPPORTUNITY occurs for a Designer with a Foam Rubber Manufacturer for their Bedding and General Design Department. Conversant with fabrics would be an advantage. Age 25/30. Applications giving full details of qualifications in writing to the Sales Manager (Bedding), Vitafoam Ltd, Don Mill, Middleton, Nr Manchester.

EAST SUFFOLK COUNTY COUNCIL
BOROUGH OF LOWESTOFT COMMITTEE FOR EDUCATION
LOWESTOFT SCHOOL OF ARTS AND CRAFTS

Applications are invited for a full-time Teacher of Basic Design throughout the School, and Hand Printed Textiles and Weaving to Intermediate and part-time advanced students. The post, vacant in September, is on the Grade 'A' Technical Burnham scale. Application forms from Borough Education Officer, Education Office, 49 High Street, Lowestoft.

PEEL PARK TECHNICAL COLLEGE, SALFORD
Principal: F. Wood, MA (OXON), LLB, AIB, AMBIM, FRSA
Applications are invited from suitably qualified candidates for the post of SENIOR LECTURER to be responsible for courses in AESTHETICS AND INDUSTRIAL DESIGN to day-release and evening classes for engineers, and the development of this subject in the School of Art and Industrial Design. Industrial experience is essential, and consideration will be given to the successful applicant maintaining contacts with industry. Salary in accordance with the Burnham Technical Scale for Senior Lecturers: Men: £1,417 10s by £52 10s to £1,627 10s. Application forms and further particulars may be obtained from The Principal, Peel Park Technical College, Salford 5, to whom completed forms should be returned as soon as possible.

CITY OF BIRMINGHAM EDUCATION COMMITTEE
COLLEGE OF ART AND CRAFTS
Principal: Meredith W. Hawes, ARCS, ARWS, NRD
SCHOOL OF INDUSTRIAL DESIGN

Head of School: N. J. Slutsky, Hon DESRCA
A full-time Lecturer in Product Design is required in the School of Industrial Design of the College, to train students up to the Ministry of Education's National Diploma in Design. Experience as a practising designer in metals and/or plastics is essential and applicants should have had adequate art training. To commence duty as soon as possible in the Autumn Term. Salary in accordance with Burnham (Further Education) Scale of Salaries for Lecturers: Men: £1,260 x £31 10s-£1,417 10s; Women: £1,008 x £25 4s-£1,134 plus equal pay increments.

SCHOOL OF POTTERY
Head of School: R. A. Lewis, ARBS, RBSA

A Grade 'B' Assistant Teacher (Man) is required in the School of Pottery. Applicants should have industrial experience and be able to teach all branches of pottery and have a special knowledge of pottery modelling and mould making. Salary in accordance with Burnham (Further Education) Scale £682 10s x £22 5s to £1,076 5s pa. In fixing the commencement salary, up to twelve increments may be allowed initially for approved industrial experience. Further particulars (state which) and application forms may be obtained from the Principal, College of Art and Crafts, Margaret Street, Birmingham 3. (sae). Closing date August 31 1959.

SITUATIONS WANTED

FURNITURE DESIGNER, LSIA, 28, with sound knowledge of construction and experience in domestic, office and boardroom work seeks position with a good company. Box 384, DESIGN, 28 Haymarket, London SW1.

ARTIST/DESIGNER of sound experience seeks change. Graphic design, ideas, lettering, colour-visuals, layout. Perfectionist in outlook, realist by training. Originality, initiative. Southern England preferred. Box 381, DESIGN, 28 Haymarket, London SW1.

COMMISSIONS & DESIGNS WANTED

A LARGE FIRM in the industrial West Midlands producing a very wide range of electrical goods, will from time to time be requiring the services of free lance Graphic Designers. Full time consultants with experience in industry and SIA members are preferred. Please apply Box 383, DESIGN, 28 Haymarket, London SW1.



The Pay-on-Answer Coin Operated Telephone for use with the new GPO subscribers trunk dialling system now being introduced by the GPO, was designed by Douglas Scott, who was recommended by The Record of Designers. Manufacturers who want staff designers or design consultants can apply for a short list (requirements must be stated in some detail) to the

Record of Designers

CoID, 28 Haymarket, London SW1, or to the CoID, Scottish Committee, 46 West George Street, Glasgow C2.

BOOKS

complete re-assessment of Penrose's usefulness. It cannot be recommended to the artist/designer because of its emphasis on the past and the markedly shallow content of its information, but if the *Penrose Annual* is to become only of interest to the printer and his apprentice then the present subtitle "a review of the Graphic Arts" is misleading.

GORDON MOORE

School furniture: British Standard 3030

Part 1 Materials, Workmanship and Finish, 4s 6d

Part 2 Performance Tests, 15s

Part 3 Pupil's Classroom Chairs and Tables, 7s 6d

Part 4 Chalkboards, 4s

Britain's post-war schools are internationally famous; the design of the furniture in these schools, however, is, in many cases, unworthy of the architecture.

The publication of the first four parts of the revised British standard should offer a challenge and provide a new impetus to the design of school furniture.

The old standard BS/MOE 11-22 was unsatisfactory, firstly because of its technical rigidity and,



School furniture

Children using desks and chairs conforming to the British Standard (D size) at the Sedgehill LCC Comprehensive School; these were designed by the furniture and display section LCC Architects' Department, in collaboration with the education and supplies department.

secondly, because of the insufficiency of the recommendations on furniture sizes, particularly in the light of more recent anthropometric research.

The new standard is a much more useful, flexible and advanced tool. No attempt is made to specify designs complete with the minimum sizes of joints and members as before; instead, the minimum requirements of materials, workmanship and finish are stated and performance tests for complete articles of furniture are laid down. The requirements of users are also given, together with recommended sizes. With this information, the designer is still free to design in any material, technique or form. One hopes that this will lead to more experiment and eventually to more adventurous, yet soundly built and properly proportioned, school furniture.

The four parts so far published are: *Part 1 Materials, Workmanship and Finish*: this specifies the requirements for these factors for all furniture covered by the

standard. Although a diversity of materials are dealt with - timber, plastics, metals, adhesives, etc - it is intended to revise this section periodically in order to include other suitable materials.

Part 2 Performance Tests: this describes the tests which can be applied to chairs, tables and desks, and storage units. These were evolved by the Furniture Development Council which has carried out similar work with domestic furniture. The tests provide a criterion of performance, more realistic and yet less inhibiting than the old specification, which will be of value not only to the designer who requires an evaluation of the strength of a new design but to all purchasing authorities.

Part 3 Pupil's Classroom Chairs and Tables: the significant part of this section deals with the sizes of furniture in relation to the sizes and postures of children.

The basic requirements for good sitting postures are clearly stated, and should be of interest to all furniture designers. They are amplified by tables recommending the distribution of different sizes of furniture, not only for the total age range but also within class groups. (It is insufficiently recognised that the size variations within a class represent a large proportion of the variation of the whole school.)

For the full recommendations of the standard to be implemented in a school, understanding and discipline are required by both the staff and children. They will be assisted in recognising sizes, however, by coloured symbols which it is intended should be provided on tables and chairs.

Where a school has a large amount of movement between classrooms and a graded system becomes inoperable, a restricted range or single size of furniture is given.

Part 4. Chalkboards: this discusses the various uses of chalkboards and deals with aspects such as surfaces, texture, colour, illumination and maintenance. Dimensional data is also given on reach, for writing purposes, of adults and children.

FRANK HEIGHT

A psychological study of typography

Sir Cyril Burt, Cambridge University Press, 15s

This small book is an expanded version of a paper originally presented to the British Psychological Society. The designer and typographer should not, however, be frightened by talk of "bipolar factors" and "correlations"; he would be unwise to dismiss it on this account.

The book has two sections with an appendix giving an admirable short history and description of current popular bookfaces.

The first deals with the legibility of different printing styles, taking into account all the factors involved, colour, size, measure, interline spacing, etc. The second gives readers' reactions to particular typefaces with subjective reasons for preferences.

These reactions can be grouped into roughly the same historical divisions as are typefaces, and show an interesting relation between preconceptions about a typeface and its legibility. Habit seems to play a part in the choice of a preferred type - the more a type is seen the more legible it appears. The general conclusions reached and the standards recommended should be compulsory reading for typographers.

The field examined was necessarily small (children's books and scientific periodicals) but the techniques outlined could with profit be made the basis for in-

tensive studies in book printing, newspaper typography, and advertising.

DAVID IGGULDEN

Books received

Five hundred years of printing, S. H. Steinberg, Faber & Faber, £1 10s.

Yorkshire: The West Riding; The Buildings of England series, Nikolaus Pevsner, Penguin Books, 10s 6d.

This month's cover

This month's cover was designed by James Reeve, 33. Mr Reeve is largely self taught, and has been staff designer at Murphy Radio Ltd for the past 11 years, working on radio cabinets and record players.

As well as graphic design, he also does a certain amount of exhibition work and industrial painting, and



James Reeve

hopes to have an exhibition of his ceramic work in the near future.

Correction

DESIGN July pages 42-3: owing to a printer's error the swatches on page 42 showing the regional colours of the Orient Line and P & O labels do not match the colours of the full size labels illustrated on page 43. Also the word 'Bombay' on one of the labels has not been printed in its correct position.

DESIGN May page 32: the Meteor electric fire was designed by J. M. Barnicot and R. F. Steward.

MANUFACTURERS in this issue

Atlas Lighting Ltd, 233 Shaftesbury Avenue, WC2
Bell Punch Co Ltd, 39 St James's St, SW1
EMI Electronics Ltd, Hayes, Middlesex
Holland & Hannen and Cubitts Ltd, 1 Queen Anne's Gate, SW1
Johnson Bros (Hanley) Ltd, Trent Sanitary Works, Eastwood Rd, Hanley, Stoke-on-Trent
Modern Home Products Ltd, 19 Muntz St, Birmingham 10
Spicers Ltd, 19 New Bridge St, EC4
Sumlock Ltd, 1 Albemarle St, W1
Walker & Hall Ltd, Electro Works, Sheffield 1
Wall Paper Manufacturers Ltd, 19-21 Mortimer St, W1
J. & J. Wiggin Ltd, Old Hall Works, Bloxwich, Walsall

DESIGNERS in this issue

David du R. Aberdeen, FRIBA; John Barnes, PSIA, of Allen-Bowden Ltd; J. M. Barnicot, MSIA; Misha Black, OBE, RDI, MINSTRA, PSIA; Christof Bon, Huile Chadwick, ARCA, ARAIS, PSIA; Peter Chamberlin, ARIBA; John D. Cochrane, DA, MSIA; Robin Day, RDI, ARCA, PSIA; Charles F. Gage, DESRA; Abram Games, OBE, RDI, PSIA; W. M. Goalett; Paul Hamilton, ARIBA; F. H. K. Henrion, MBE, RDI, PSIA, AGI; Eric Lyons, OBE, FRIBA, MSIA; Stephen McFarlane; David Mellor, DESRA; Robert Nicholson, PSIA; Roger Nicholson, ARCA; Geoffrey Powell; James Reeve, MSIA (cover); Hans Schlegler, RDI, PSIA; Philip C. Scott; Richard Stevens, BSC, MSIA; R. F. Steward, LSIA; Sheila Stratton, ARCA, MSIA; Edward Veevers; Robert Welch, DESRA, MSIA; Norman Whitchoe, AADIP, ARIBA, MSIA; Berthold Wolpe, RDI.

CLASSIFIED

advertisements

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INTERIOR DESIGNERS, decorators, soft furnishers seek smaller contracts where imagination and craftsmanship are valued. Maurice Brown, ARCA, NRD, 27 High Street, NW8. PRI 3516.

FREE-LANCE commercial artist, 25 years' Continental experience, modern designs - poster, trade-mark, packaging, display, etc - from original rough to finished artwork. FIN 1314.

UPHOLSTERY manufacturer requires the services of designer, capable of creating not too advanced designs of three-piece suites, medium class. This can be regular commission, terms by arrangement. A. L. Nathan & Son Ltd, 11/15 Russell Street, Liverpool.

THE SERVICE of an experienced designer acquainted with American and Continental display techniques is available to a company considering the re-design of shops, showrooms, or commissioning the design of exhibitions or special displays. Box 380, DESIGN, 28 Haymarket, London SW1.

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KINGS NORTON PRESS (1947) LTD. Fine colour Printers have installed yet another Precision Letterpress Printing Machine to meet increasing demands. Our design service is available for submission of ideas, for Leaflets, Brochures and Catalogues, either by Letterpress or Litho. Specimens available from Factory - Kings Norton, Birmingham 30. Telephone: KINGS Norton 2262. London Office - Stuart House, 1 Tudor Street, London EC4. Tel: FLEET Street 1379.

WEATHER OAK PRESS LIMITED. The head of our Design Department, Mr A. S. Workman, has won one of the top four awards in the 1959 Design Competition organised by the British Federation of Master Printers. Three other members of our creative staff have won highly commended or certificate places in this Competition. In our printing works we are running a permanent night shift and in all departments we specialise in high quality work and have established our reputation on this basis. Literature and specimens on request. Creative artists, photographers, colour printers. Head Office and Works, Summer Road, Edgbaston, Birmingham 15.

PROTOTYPES & MODEL MAKING

METAL-WIRE-TUBULAR WORK. Let us manufacture your prototypes and/or production runs. Holborn Metal Works, 334 Upper Street, N1. CAN 8042.

RICHARD DENDY & ASSOCIATES welcome your enquiries for architectural, engineering, experimental and ship models; production runs of advertising units in rubber,

plastics, wood or metal; prototypes in all materials; giant exhibition and carnival displays. 4, 5 and 6 Seaton Place, Hampstead Road, London NW1. EUSTON 7617 and 1981.

WESTWAY MODELS LIMITED - the largest model-making organisation in the United Kingdom specialising in models for display, exhibition, product design and prototype-development. 178 Brent Crescent, London NW10. Telephone ELGAR 3267-8.

PARTRIDGE'S MODELS LIMITED, established 1921, specialise in prototype and development work in any suitable material. Close collaboration with foremost industrial designers and injection moulders ensures speedy and satisfactory solutions. 14 South Wharf Road, W2. PADDDINGTON 4653.

MISCELLANEOUS

FURNITURE SPECIALS: for the short run try Yew, Cherry, Plane, Elm or Sycamore. Albert Turner & Son Ltd, 35 High Street, Lewes. Telephone LEWES 520.

PICTURE FRAMES of all types made. The largest stock in London. Rowley, 86-87 Campden Street, Kensington. Telephone PARK 4349.

SHIPPING & PACKING

INTENDING EXHIBITORS at European Fairs should contact Davies Turner & Co Ltd, 4 Lower Belgrave Street, London SW1, SLOANE 3455, for details of DIRECT ROAD SERVICE.

JOSEPH LUCAS (ELECTRICAL) LIMITED

require a

JUNIOR INDUSTRIAL DESIGNER

to assist in the appearance design of automobile equipment and accessories.

Applicants should have Diploma in Industrial Design and some industrial experience is desirable. Progressive salary.

Five day week. Staff Pension Fund.

Apply in writing giving full details of age, qualifications and experience to the Personnel Manager, JOSEPH LUCAS (ELECTRICAL) LTD., Great King Street, Birmingham 19, quoting reference PM/D/274.

RADIO AND TELEVISION DESIGNERS

Sobell and McMichael require experienced cabinet and styling designers for their expanding organisation. This is an opportunity offering great scope for really progressive designers.

Full details to

Radio & Allied Industries Ltd,
Wexham Road, Slough
or phone

Personnel Manager, Slough 24541.

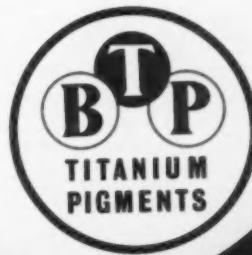
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continued from page 70

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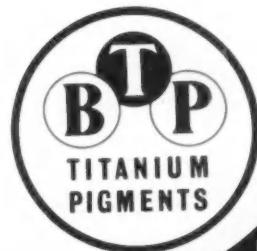
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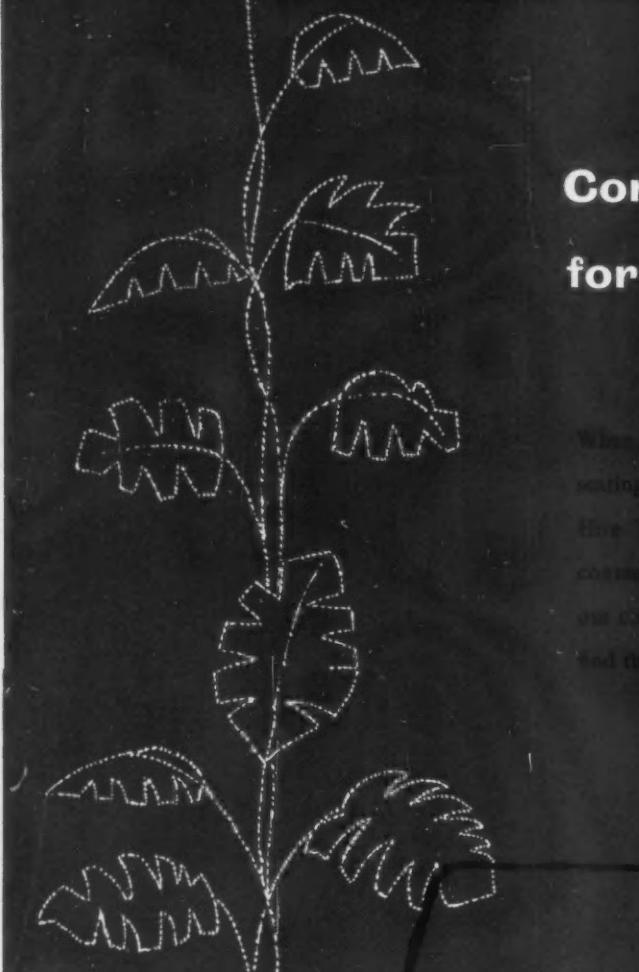
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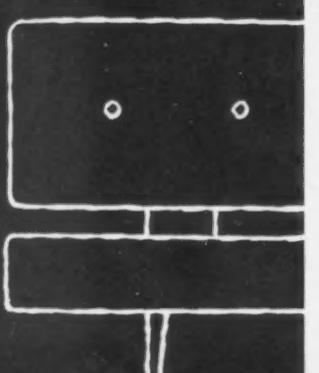
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